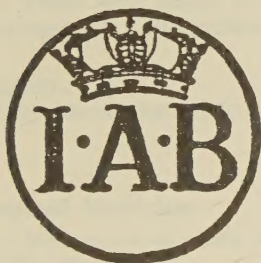


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HELMINTHOLOGICAL ABSTRACTS

incorporating
BIBLIOGRAPHY OF HELMINTHOLOGY
For the Year 1942.



IMPERIAL BUREAU OF AGRICULTURAL PARASITOLOGY
(HELMINTHOLOGY)

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Vol. XI, Part 4.

160—Advisory Leaflet. Ministry of Agriculture and Fisheries. London.

- a. ANON, 1942.—“Stomach worms in sheep (parasitic gastritis).” No. 275, 3 pp. [Revision of leaflet published in 1936.]

161—American Journal of Clinical Pathology.

- a. SCHENKEN, J. R. & MOSS, E. S., 1942.—“*Enterobius vermicularis* in the appendix. Report of a study on 1,000 surgically removed appendices.” 12 (10), 509–517.

162—American Journal of Pathology.

- a. DHAYAGUDE, R. G. & AMIN, B. M., 1942.—“Microfilarial granulomata of the spleen.” 18 (2), 351–361.

(162a) In the spleens from autopsies in Bombay multiple gross nodular lesions containing nematode larvae were discovered. These were stated to be microfilariae and in a footnote are identified as those of *Wuchereria bancrofti*. Microphotos illustrate the paper. R.T.L.

163—American Journal of Surgery.

- a. STEINKE, C. R., 1942.—“Echinococcal cyst (hydatid) of spleen and liver. Report of two cases.” 57 (3), 544–547.

164—American Journal of Tropical Medicine.

- a. CHANDLER, A. C., 1942.—“First record of a case of human infection with tapeworms of the genus *Mesocestoides*.” 22 (5), 493–496.
- b. HILL, A. W. & ANDREWS, J., 1942.—“Relation of hookworm burden to physical status in Georgia.” 22 (5), 499–506.
- c. BONNE, C., 1942.—“Invasion of the wall of the human intestine by ancylostomes.” 22 (5), 507–509.

(164a) Chandler describes the first recorded case of human infestation with a species of *Mesocestoides*. The patient was a one-year-old child from E. Texas and he believes that the cestode was *M. variabilis*, usually a parasite of carnivores. This material was larger than is generally recorded for the species but its general anatomical character was typical.

P.A.C.

(164b) Hill & Andrews have examined the physical condition of hookworm carriers in S. Georgia, all of whom were under 20 years old. All were examined physically, their height and weight recorded and haemoglobin determined. Intensive clinical studies were made on persons whose condition suggested advanced hookworm disease. There was a progressive secondary anaemia often increased by malnutrition. Some relief was given by iron therapy but permanent improvement necessitated the use of anthelmintics, iron and a better diet.

P.A.C.

(164c) Bonne describes 5 human infestations with *Ancylostoma braziliense* among Chinese and Malays in Java. The presence of this parasite in an unusual host resulted in abnormal invasion of the intestinal wall, leading to tissue destruction in the submucosa, haemorrhage and inflammatory reaction. The condition did not apparently have fatal consequences, death in these patients being due to other causes.

P.A.C.

165—American Midland Naturalist.

- a. HUGHES, R. C., HIGGINBOTHAM, J. W. & CLARY, J. W., 1942.—“The trematodes of reptiles. Part I. Systematic section.” 27 (1), 109-134.
- b. MIZELLE, J. D. & BRENNAN, W. J., 1942.—“Studies on monogenetic trematodes. VII. Species infesting the bluegill sunfish.” 27 (1), 135-144.
- c. MIZELLE, J. D. & JASKOSKI, B. J., 1942.—“Studies on monogenetic trematodes. VIII. Tetraonchinae infesting *Lepomis miniatus* Jordan.” 27 (1), 145-153.
- d. HAUGEN, A. O., 1942.—“Life history studies of the cottontail rabbit in southwestern Michigan.” 28 (1), 204-244.

(165a) Hughes et al. have compiled a list of 476 (considered valid) species of trematodes occurring in reptiles. These are arranged in systematic order together with the principal synonyms, hosts and the countries of origin. The subsequent parts are to comprise a host- and name-list, and a bibliography. N.G.S.

(165b) Mizelle & Brennan record 11 tetraonchid trematodes from the gills of *Lepomis macrochirus*. Detailed comparative descriptions of *Urocleidus mucronatus*, *U. acer*, *Cleiodiscus robustus* and *Actinocleidus fergusonii* from widely separated localities in North America show some very striking variations, which are nevertheless intraspecific. N.G.S.

(165c) Mizelle & Jaskoski have studied 8 species of Tetraonchinae from the gills of *Lepomis miniatus* from Reelfoot Lake, Tenn. Detailed comparative descriptions are given of *Actinocleidus brevicirrus* n. sp., *A. subtriangularis* n. sp., *Cleiodiscus venardi* n. sp., *C. chelatus* n. sp., *Urocleidus miniatus* n. sp., *U. parvicirrus* n. sp., and further data on *U. attenuatus* and *U. chaenobryttus* reveal new variations in these species. N.G.S.

(165d) In the course of his study of the cottontail rabbit (*Sylvilagus floridanus mearnsii*) Haugen deals briefly with its parasites. Of 21 rabbits examined, 7 were infected with *Hasstilesia tricolor*, 10 with *Cysticercus pisiformis*, 14 with *Cittotaenia pectinata*, and 5 with *Trichostrongylus* sp. A.E.F.

166—Anales de la Facultad de Veterinaria. Montevideo.

- *a. BACIGALUPO, J., 1942.—“Fasciola hepática L. Su ciclo evolutivo en la República Argentina. Distomatosis hepática.” 4 (1), 9-134.

167—Anales del Instituto de Biología.

- a. CABALLERO Y C., E., 1942.—“Tremátodos de las ranas de la ciénaga de Lerma, Estado de México. III. Redescrípción de una forma Norteamericana de *Haematoleochus* y algunas consideraciones sobre *Glypthelminis californiensis* (Cort, 1919).” 13 (1), 71-79. [English summary pp. 78-79.]
- b. CABALLERO Y C., E., 1942.—“Tremátodos de las tortugas de México. II. Descripción de un nuevo género de la familia Pronocephalidae Looss, 1902 y descripción de una nueva especie del género *Octangioides* Price, 1937.” 13 (1), 81-90. [English summary p. 89.]
- c. CABALLERO Y C., E., 1942.—“Descripción de un *Paramonostomum* (Trematoda: Noto-cotylidae) encontrado en los patos silvestres del Lago de Texcoco, V.” 13 (1), 91-95. [English summary p. 94.]
- d. CABALLERO Y C., E. & CERECERO, C., 1942.—“Tremátodos de los murciélagos de México. II. Redescrípción y posición sistematica de *Distomum tubiporum* Braun, 1900.” 13 (1), 97-104. [English summary p. 104.]
- e. CABALLERO Y C., E., 1942.—“Descripción de *Parallintoshius tadaridae* n.sp. (Nematoda: Trichostrongylidae) de los murciélagos de México.” 13 (1), 105-109. [English summary p. 109.]
- f. LARIOS, I., 1942.—“Dos especies de género *Prosthogonimus* encontradas en los oviductos de aves Anseriformes de México.” 13 (1), 111-121. [English summary p. 120.]

(167a) *Haematoleochus parvitellarius* n. sp. from *Rana montezumae* is differentiated from *H. elongatus*, and *H. complexus* is redescribed. R.T.L.

(167b) *Choanophorus rovirosai* n.g., n. sp. is made type of a new subfamily Choanophorinae of the Pronocephalidae, and *Octangioides tlacotalpensis* n. sp. is differentiated from *O. skrjabini*. Both of these new species occurred in *Dermatemys mawii*. R.T.L.

(167c) *Paramonostomum obtortum* n. sp. is recorded from *Querquedula discors*. R.T.L.

* Titles so marked throughout this number have not been seen in the original.

(167d) *Distomum tubiporum* Braun 1900 is made type of *Maxbraunium* n.g. It occurs in *Vespertilio lasiurus*, *Lasiurus borealis* and *Chilonycteris rubiginosa mexicana*. R.T.L.

(167e) A trichostrongylid, *Parallintoshius tadaridae* n. sp., from *Tadarida brasiliensis* and *Natalus mexicanus* is differentiated from *P. parallintoshius* de Araujo 1940. R.T.L.

(167f) Separate descriptions are given of *Prosthogonimus rudolphii* Skrjabin, 1919 and *P. karausiaki* Layman, 1926, which were collected from the oviducts of *Querquedula cyanoptera*, although Witenberg and Eckman consider them identical. R.T.L.

168—Anales de la Sociedad Mexicana de Oftalmología y Oto-Rino-Laringología.

- a. PACHECO-LUNA, R., 1942.—“Dos casos de oncocercosis estudiados después de 24 años de aparente curación.” 17 (1), 14-17. [English summary pp. 17-18; French summary p. 18; German summary p. 19.]

169—Annales de la Société Belge de Médecine Tropicale.

- a. RODHAIN, J., 1942.—“Un cas d'onchocercose avec polylymphadénopathie chez l'Européen.” 22 (1), 11-17.
- b. SCHWETZ, J. & DARTEVELLE, E., 1942.—“Sur les mollusques gastéropodes pulmonés et la schistosomiase de l'Est du Kivu-Ituri et spécialement dans l'agglomération de Kasenyi au Lac Albert.” 22 (2), 123-154.
- c. SCOPS, C., 1942.—“Note au sujet de la bilharziose dans le plaine de Kasenyi (Lac Albert).” 22 (2), 155-165.

(169b) Schwetz & Darteville report on planorbid molluscs collected by the senior author in the course of a malarial survey in the eastern Congo, between lakes Kivu and Albert. In 4 foci of Schistosomiasis mansoni he found *Planorbis boissyi tangikanus*, *P. choanomphalus*, *P. stanleyi*, *P. adowensis*, *Gyraulus natalensis*, and *Segmentina kanisaensis*. In a discussion, van den Berghe points out that the last two have a different and largely aerial ecology and have been found devoid of cercariae, that *P. adowensis* is a recognized carrier, and that large rivers and lakes are of small epidemiological importance in the spread of schistosomiasis. B.G.P.

(169c) Scops shows that 26% of 2,597 persons examined in the Kasenyi (western shore) region of Lake Albert were infested with *Schistosoma mansoni*. An incidence almost as high in females as in males suggests that infestation is associated not so much with the lake fishery (a male occupation) as with the small Kisege river, used for ablution. *Ascaris* was plentiful, *Trichuris* and *Taenia* much less so, and hookworm absent. In discussion, van den Berghe states that saline flotation is necessary for the diagnosis of hookworms, though useless for schistosomes. B.G.P.

170—Antiseptic. Madras.

- *a. RATNA, V., 1942. “Elephantiasis.” 39, 205-209.

171—Australian Veterinary Journal.

- a. BROADBENT, M., 1942.—“A survey of the incidence, distribution and prevalence of the helminth parasites of the domestic fowl in Queensland.” 18 (5), 200-204.

(171a) Broadbent has recovered 13 species of helminths from domestic fowls in Queensland. *Choanotaenia infundibulum* is recorded for the first time from the State. *Ascaridia galli* and *Capillaria columbae* do not appear to occur in the western districts, and *Oxyuris spiralis* is very rare in the south. *Acuaria spiralis* and *A. hamulosa* were not found though previous surveys show that they do occur. P.A.C.

172—Berliner und Münchener Tierärztliche Wochenschrift.

- a. SCHMID, F., 1942.—“Zur Behandlung des Wurmbefalles unserer Haustiere.” Jahrg. 1942 (33/34), 249-251.

(172a) Schmid states that war-time labour shortage may make it impossible for farmers to pay due attention to the preventive measures necessary for the control of disease in domestic

animals. Veterinary surgeons must therefore exercise even greater care than usual when treating infected animals. The treatment of helminthic infections is dealt with generally, under 5 heads: (i) selection of the most suitable anthelmintic, (ii) the time of treatment, (iii) preparation of animals for treatment, (iv) method of administration, and (v) after-treatment. A.E.F.

173—Bi-Monthly Bulletin. North Dakota Agricultural Experiment Station.

- *a. SEARS, A. C. & LONGWELL, J. H., 1942.—“Effectiveness of certain ‘worm remedies’ on worm-infested feeder lambs.” 4 (4), 20–22.

174—Boletín de la Asociación Médica de Puerto Rico.

- a. DÍAZ RIVERA, R. S., SUÁREZ, R. M., & HERNÁNDEZ MORALES, F., 1942.—“Hypoprothrombinemia incident to tropical and to non-tropical diseases.” 34 (5), 177–182.

175—Boletín del Instituto de Clínica Quirúrgica. Universidad de Buenos Aires.

- a. RIVAS, C. I. & PERINETTI, H., 1942.—“Quiste hidatídico de la glándula tiroides.” 18 (147), 407–412.
 b. IVANISSEVICH, O. & RIVAS, C. I., 1942.—“Tratamiento de los quistes hidatídicos del pulmón.” 18 (147), 458–460.
 c. IVANISSEVICH, O. & RIVAS, C. I., 1942.—“Las causas de muerte en la cirugía de los quistes hidatídicos del pulmón.” 18 (148), 568–569.
 d. ARCE, J., 1942.—“Hidatidosis del pulmón. (Recidiva en la advenencia de un quiste ocluido).” 18 (149), 609–617.
 e. NIÑO, F. L., 1942.—“Apendicitis verminosa por *Enterobius vermicularis*.” 18 (149), 683–693.

(175e) Niño illustrates his study of the histology of 24 appendices showing lesions due to *Enterobius* infection with 10 microphotographs. These 24 cases had shown typical appendicular syndromes. His explanation of the imparity of sex incidence—7 male and 17 female—is that it is due to the higher incidence of threadworms in females than in males. No percentage incidence of appendicitis due to *Enterobius* is given. R.M.Y.

176—Boletín de la Oficina Sanitaria Panamericana.

- a. DAMPF, A., 1942.—“La Carretera Panamericana y el problema de la oncocercosis.” 21 (8), 753–758. [English summary pp. 757–758.]

(176a) Attention is drawn to the fact that as the Pan-American highway traverses two foci of onchocerciasis, viz., Chiapas, in Mexico, and Guatemala, the spread of this disease is likely to become an international problem. R.T.L.

177—Boletines y Trabajos. Academia Argentina de Cirugía.

- *a. CALCAGNO, B. N. & VÍVOLI, D., 1942.—“Terapéutica biológica de la hidatidosis.” 26, 116–117.
 *b. CALCAGNO, B. N. & CASIRAGHI, S. C., 1942.—“Terapéutica biológica de la equinocosis. Quiste hidatídico ‘a tipo ascítico’.” 26, 237–248.
 *c. JORGE, J. M. & GONI MORENO, I., 1942.—“Hidatidosis secundaria broncogenética.” 26, 373–374.

178—Brasil-Médico.

- a. PAULA, H. DE, 1942.—“Incidencia de verminose em escolares.” 56 (21 22), 271–272.

179—British Medical Journal.

- a. FREEDMAN, B., 1942.—“Phenothiazine for threadworms.” [Correspondence.] Year 1942, 1 (4237), p. 397.
 b. MILLER, M. J., 1942.—“Treatment of threadworms.” [Correspondence.] Year 1942, 2 (4260), p. 262.

(179a) Freedman states that phenothiazine proved extremely lethal to *Ascaris lumbricoides* in a Lascar and that the worms when passed were stained bright red like the urine. R.T.L.

(179b) Miller is of opinion that any mode of treatment which depends on its mechanical effect for the removal of *Oxyuris vermicularis* is at the best only palliative. His experience with coated tablets of gentian violet in children of school age has proved effective in 60% to 90% of the cases. Untoward symptoms are avoided if the drug is given in two 5-day periods separated by a treatment-free period of one day. While chocolate-coated phenothiazine is even more efficient he deprecates its use for the present because of its haemolytic and other toxic effects.

R.T.L.

180—Bulletin. Connecticut Geological and Natural History Survey.

- a. HUNTER, III, G. W., 1942.—“Studies on the parasites of fresh-water fishes of Connecticut.” No. 63, 228–288.

(180a) Hunter reports 21 species of trematodes, 12 of them in the larval state, from fresh-water fish from Connecticut lakes. He also found 11 cestode species, 4 being larvae, 10 nematode species, 2 in the larval stage, and 5 acanthocephalans, only one of which was not in the adult stage. Some species were extremely common, others less so. He considers the life-histories of these parasites, where they are known, and the changes they induce in the host and suggests a number of measures which might be adopted to cut down loss to a minimum. A high percentage of the fish were found to be parasitized when compared with other districts, though fewer species are present and not all of them have much economic importance.

P.A.C.

181—Bulletin. Oregon Agricultural Experiment Station.

- a. MORRILL, D. R. & SHAW, J. N., 1942.—“Studies of pathology in cattle produced by liver fluke (*Fasciola hepatica*).” No. 408, 30 pp.

182—Bulletin de la Société de Pathologie Exotique.

- a. DESCHIENS, R., 1942.—“Données biologiques relatives aux substances toxiques vermineuses.” 35 (3), 115–122.
b. DESCHIENS, R., 1942.—“Milieu de culture a rendement élevé pour la récolte des spores d'Hyphomycetes prédateurs de nématodes.” 35 (6/8), 237–241.

(182a) Deschiens reviews the literature, in particular that by Macheboeuf and Mandoul, which deals with the toxic action of extracts of certain helminths. Using their technique a protein-free extract of *Parascaris equorum* was injected into the hearts of guinea-pigs. Extracts from different worms gave different results. This may have been due to differences in the age and maturity of the helminths. Similar tests with extracts of *Hirudo officinalis* and *Gastrophilus intestinalis* gave negative results. He suggests that the pathogenic action associated with the protein fraction is distinct from the intoxication caused by the non-protein fraction but that both show the characteristics of anaphylactic shock.

P.A.C.

(182b) For the utilization of nematode-destroying hyphomycetous fungi as controlling agents against parasitic nematodes, whether of man, animals or plants, Deschiens describes the preparation of a suitable culture medium consisting of chopped oat straw 5 g.; agar 12 to 15 g.; malt extract 5 g.; distilled water 1 litre. He gives detailed directions for making the medium, its use in Roux culture dishes, inoculation with the desired fungi and the collection of the spores which are formed in quantity after 60 to 80 days at 25° C. The dried spore-containing material is distributed over soil, etc., as desired. The preparation of a second medium, without oat straw, is also given, designed for use with composts in which delicate ornamental plants are to be grown.

T.G.

183—Canadian Journal of Comparative Medicine.

- a. SWALES, W. E., 1942.—“Diseases of sheep in Canada. I. Factors influencing the occurrence of diseases of sheep in Canada. II. Haemonchosis (verminous gastritis, stomach-worm disease).” 6 (8), 242–245.
b. McINTOSH, R. A., 1942.—“Stomach worm disease of sheep.” 6 (9), 259–261.

(183a) The author points out that helminthic disease in sheep in Canada is found more commonly in areas with a high rainfall and a high temperature during the grazing season. The diagnosis and control of haemonchosis are discussed and suitable doses of the anthelmintics recommended for its treatment are given. D.O.M.

(183b) The diagnosis of haemonchosis in sheep and the post-mortem findings are fully discussed by the author. Phenothiazine at the rate of 20 to 30 g. is recommended for its treatment but as a preventive against stomach, nodular and small intestinal worms, doses of 30 to 40 g. given in winter and spring are considered advisable. D.O.M.

184—Canadian Journal of Research. Section B. Chemical Sciences.

- a. COLLIER, H. B. & ALLEN, D. E., 1942.—“Enzyme inhibition by derivatives of phenothiazine. III. Catalase, cytochrome oxidase, and dehydrogenases.” 20 (12), 284–290.

(184a) Collier & Allen, using manometric methods, have confirmed their findings that leucophenothiazone inhibits catalase (50% inhibition required a 6×10^{-6} M solution) and cytochrome oxidase. This inhibition is attributed to the phenolic hydroxyl group. Phenothiazone sulfoxide, which also inhibits catalase, probably does so by virtue of the sulphonium ion. Succinoxidase (beef heart), lactic dehydrogenase (yeast) and urease are inhibited, the latter only partially, by phenothiazone, but d-amino-acid oxidase is only slightly affected. Aerobic oxidation of succinate is also inhibited by thionol while the oxidised form of phenothiazone acts on succinic dehydrogenase. The significance of these results in relation to the anthelmintic and insecticidal properties of phenothiazine is briefly discussed. W.P.R.

185—Canadian Journal of Research. Section D. Zoological Sciences.

- a. SWALES, W. E., COLLIER, H. B. & ALLEN, D., 1942.—“Effects of phenothiazine on horses. I. Studies in haematology and pharmacology.” 20 (11), 349–361.

(185a) Swales et al. report on 3 experiments in which egg-counts and various haematological determinations were made, before and after giving phenothiazine as follows: (i) 70 g. to horse A weighing 1,250 lb., (ii) 60 g. to horse B weighing 1,200 lb., (iii) 30 g. to horse A after a lapse of 97 days. Results indicate that a single dose of 60 to 70 g. may produce a prolonged haemolytic effect, especially in a horse with small red cells. The icterus is not obstructional but cythaemolytic (as shown by faecal urobilinogen). Less than 50% of the drug could be recovered in urine or faeces. There was evidence of marked damage to kidneys but not to liver, and haematopoiesis was normal. 30 g. phenothiazine was completely effective as an anthelmintic and the resulting haemolysis was negligible. B.G.P.

186—Canadian Public Health Journal.

- a. KUITUNEN-EKBAUM, E. & MORGAN, E. M., 1942.—“Occurrence of *Enterobius vermicularis* in the appendix.” 33 (7), 340–343.

187—Ciencia. Mexico.

- a. PERRIN, T. G., 1942.—“Algunos estudios sobre triquinosis ignoradas.” 3 (34), 108–114.

(187a) Direct microscopic examination of the diaphragms of 200 human cadavers (with no clinical history of trichinelliasis) in Mexico showed 25 (12.5%) to be infected with *Trichinella*. The artificial digestion technique would probably have given even higher figures. Further, 18, or 14.4%, of 125 persons reacted positively to immunological tests: in this case also there were no clinical signs of infection. In view of these high figures the importance of adopting suitable preventive measures is stressed. A.E.F.

188—Cirugía y Cirujanos.

- *a. VILLASEÑOR, C., 1942.—“Estudio histopatológico de un caso de cisticercosis encefálica.” 10, 309–330.

189—Clinical Proceedings. Journal of the Cape Town Post-Graduate Medical Association.

- a. GELFAND, M., 1942.—“The clinical features of intestinal bilharziasis (*S. mansoni*).” 1 (8), 247-252.

190—Comptes Rendus (Doklady) de l'Académie des Sciences de l'URSS.

- a. TAKHISTOV, B. A., 1942.—“The biological adaptability of larvae of *Dictyocaulus hadweni*, a nematode of the lungs of the reindeer, to the conditions of the polar climate.” 34 (2), 67-68.
- b. SKRYABIN, K. I., 1942.—“Palpal apparatus of the male of the nematode *Skryabinema tarandi*, parasitic of the reindeer.” 34 (4/5), 146-148.
- c. SKRYABIN, K. I., 1942.—“Foundation of a new trematode family, Megasolenidae fam. nov., in connexion with an analysis of the taxonomic significance of the lymphatic system and the hermaphrodite bursa.” 35 (2), 58-60.
- d. SKRYABIN, K. I. & MATEVOSYAN, E. M., 1942.—“Stages in the postembryonic development of cestodes of the family Hymenolepididae and an attempt to establish morphological types of their larvicysts.” 35 (3), 83-85.
- e. SKRYABIN, K. I. & MATEVOSYAN, E. M., 1942.—“Typical morphological modifications of the chitinous organs of the scolex in cestodes from the family Hymenolepididae.” 35 (3), 86-88.
- f. PETROV, A. M. & BOROVKOVA, A. M., 1942.—“Contribution to the study of the cycle of development of *Capillaria plica* (Rudolphi, 1819), a nematode of the bladder of dog and fox.” 35 (5), 159-160.
- g. SKRYABIN, K. I. & MATEVOSYAN, E. M., 1942.—“Types of topographical correlations of sexual glands in cestodes of the family Hymenolepididae and their taxonomic significance.” 36 (1), 32-35.

(190a) In the Saam district of the Kola Peninsula, U.S.S.R., reindeer over one year old are usually infected with *Dictyocaulus hadweni*. Owing to the slow rate of development of the parasite in the reindeer the infective stages swallowed during the summer or early autumn do not become sexually mature until the following spring. This provides the larvae when passed in the faeces with an opportunity of developing during the short polar or subarctic summer. Prophylaxis lies in changing the grazing plots on the tundra every 2 days during the hottest period, every 3 days when the weather is warm, and every 4 or 5 days during cool spells.

R.T.L.

(190c) The hermaphrodite bursa peculiar to the three trematode genera *Megasolena*, *Haplodena* and *Carassotrema* is taken as the basis of a new family Megasolenidae, linking Allocreadiidae with Paramphistomatidae and Angiodictyidae. The presence or absence of a lymphatic system is regarded as of subfamily value separating the Megasoleninae Manter, 1935, containing *Megasolena* and *Haplodena*, from Carassotrematinae n. subf. containing *Carassotrema*. The author places *Apocreadium* in a new subfamily Apocreadiinae in the Allocreadiidae.

R.T.L.

(190d) Skryabin & Matevosyan describe 6 typical phases in the development of the cysticeroid, beginning with the onchosphere. This in turn becomes vacuolated, the megalosphere, elongated with some tissue differentiation, the metamere, and on to scolexogeny where the structure of the head and neck become apparent. Later the stage of invagination appears leading to the fully developed larval cyst. Slight variations of these stages occur in certain species, but fundamentally all cysticeroids pass through them. They also describe certain types of cysticeroid, 5 of which were originally recognized by Villot in 1883, and they add 3 more. The ramicercus is a larva bearing lateral outgrowths which may become ramifications: the microcercus is characterized by the great reduction of the tail and the diplocercus has no tail at all but has a massive cuticular development.

P.A.C.

(190e) Skryabin & Matevosyan consider that the hooks of the family Hymenolepididae fall into 11 different groups. Each hook is composed of a radix, divided into manubrium and processus radialis and an acies. The morphological peculiarities of these elements and the correlation of their respective sizes can be used to describe the hooks. They suggest that descriptions of species should include not only number and size of hooks but a reference to the morphological type to which they belong. They will later give an analysis of the hooks of more than 450 species of the family.

P.A.C.

(190f) The eggs of *Capillaria plica* take 21 to 22 days to reach the infective stage at 26° to 28° C. Specimens of *Lumbricus terrestris* and *L. rubellus* were experimentally infected and during their sojourn in these earthworms anatomical changes took place in the oesophagus and intestine of the larvae. These infected earthworms were fed to foxes and dogs and at autopsies on the 49th and 63rd day parasites were found in the bladder. None were found in the controls used. R.T.L.

(190g) The arrangement of the genitalia is a useful characteristic for specific determination within the genus *Hymenolepis*. Skryabin & Matevosyan recognize 14 variations, to each of which they give a name and mention some of the species concerned. Other morphological details can be used for further subdivision of the genus. P.A.C.

191—Comptes Rendus des Séances de la Société de Biologie.

- a. GOTHIE, S., 1942.—“Développement comparé de l'oeuf d'*Ascaris megalocephala* en anaérobie et en aérobie.” 136 (13 14), 487-488.

(191a) Gothie records that it is possible to obtain *in vitro* development of the eggs of *Parascaris equorum* under anaerobic conditions. Further development is conditional upon the larvae being exposed to air. He has established the presence in the egg of a deep blue fluorescent substance which appears to vary according to the surrounding humidity. This fluorescence seems to depend on the presence of ascarilic acid. D.F.

192—Cornell Veterinarian.

- a. FENSTERMACHER, R. & OLSEN, O. W., 1942.—“Further studies of diseases affecting moose, III.” 32 (3), 241-254.
b. HOWELL, C. E. & BRITTON, J. W., 1942.—“Phenothiazine as an anthelmintic.” 32 (3), 255-265.

(192a) Continuing their investigations of diseases of moose in Minnesota, Fenstermacher & Olsen report the following helminths: *Paramphistomum cervi*, *Fasciolopsis magna*, *Moniezia expansa*, hydatid, a number of unidentified cysticerci, some unidentified nematodes from the diaphragm and omentum, *Setaria labiata papillosa*, *Nematodirella longispiculum*, *Trichuris* sp., *Oesophagostomum venulosum* and *Dictyocaulus viviparus*. The latter species has not previously been reported from Minnesota. The infestation of the liver with *Fasciolopsis magna* in one animal was very heavy and was the cause of death. P.A.C.

(192b) Howell & Britton recommend for horses daily doses of 1 to 5 g. phenothiazine up to a total of 25 to 30 g. per 1,000 lb. While the dose can often be given all at once, the fractional dose is recommended for brood and lactating mares and for weak and anaemic horses. A review of the literature shows that extreme anaemia, emaciation, or constipation are contra-indications, and that anaemia, constipation, and kidney congestion are common toxic results of treatment. The drug is effective against *Trichostrongylus axei* in foals, which show a maximal infestation with this worm at about 8 months old. B.G.P.

193—Current Science.

- a. LAL, M. B., 1942.—“The occurrence of the nematode genus *Oswaldocruzia* in India.” 11 (8), p. 345.

(193a) Lal briefly reports the finding of a species of *Oswaldocruzia* in *Bufo melanostictus* at Lucknow. This is the first record of the genus in India. A.E.F.

194—Deutsche Medizinische Wochenschrift.

- a. SPAETH, H., 1942.—“Die Diagnose der Trichinose mittels Hauttest und Komplement-bindungsreaktion.” 68 (38), 935-938.

(194a) Spaeth has tested a number of trichinosis cases with the Casoni skin test and by the complement fixation test. In the skin test the appearance of both immediate and delayed reactions is necessary for a positive result. Both were present in all cases and about half of them showed eosinophilia. The complement fixation test is rather less satisfactory than the skin test. P.A.C.

195—Deutsche Militärarzt (Der).

- *a. PARRISIUS, W., LAMPE, G., RÖMER, G. & HÖNIGHAUS, L., 1942.—“Über Erfahrungen während einer Trichinoseepidemie.” 7 (3), 198—

(195a) An army battalion was given a meal including sausages made from the flesh of a pig afterwards found to be trichinous. All the officers and men, numbering 617, who had eaten the sausages became ill. The chief symptoms were diarrhoea, oedema of the eyelids and face, and high fever. In some cases the faces were so swollen as to render the patients unrecognizable. The outbreak proved to be relatively mild; only one man died following a pulmonary embolism after venous thrombosis. There were also pronounced changes in the cardiac muscles. [From an abstract in Z. Fleisch. u. Milchhyg., 52, p. 255.] R.T.L.

196—Deutsche Tierärztliche Wochenschrift.

- a. SCHMID, F. & FRANCK, R., 1942.—“Die Wirkung von Wurmmitteln auf die verschiedenen Strongylienarten des Pferdes. VI. Cholivetrat. VII. Cuprosolvin.” 50 (41/42), 421–422.

(196a) “Cholivetrat” (containing copper, arsenic and aniline components) was found to be effective against *Strongylus* spp., especially *S. vulgaris*; it had little, if any, effect on *Trichonema* spp. “Cupro olvin” (an ammoniacal cupric oxide solution) was effective against *Strongylus* spp. and, to a lesser degree, against *Trichonema* spp. Both preparations had a pronounced roborant effect. A.E.F.

197—Deutsche Tropenmedizinische Zeitschrift.

- a. OLDENBURG, E., 1942.—“Gesundheitsverhältnisse und -einrichtungen, ärztliche Versorgung und wichtigste Infektionskrankheiten in Nigeria in den Jahren 1921–1937.” 46 (7), 169–185; (8), 193–208; (9), 232–242.

(197a) This survey of health conditions and the incidence of disease in Nigeria includes on pp. 206–208 figures for helminth infections covering the years 1930–1936. The information has been taken from the Annual Supplements to the Tropical Diseases Bulletin. A.E.F.

198—Deutsche Zeitschrift für Chirurgie.

- a. LAZAREVIĆ, V., 1942.—“Mächtige Nierenechinokokkencyste mit völligem Schwund des Nierenparenchyms.” 255 (11/12), 747–750.

199—Día Médico.

- *a. CEBALLOS, A., 1942.—“Operacion en un tiempo con baronarcosis para los quistes hidáucos de pulmón libres de adherencias pleurales.” 14, 379–382.

200—East African Medical Journal.

- a. YOUNG, W. A. & GORDON, S., 1942.—“Onchocerciasis in a West African native on service in East Africa.” 19 (4), 131–134.
b. ENZER, J., 1942.—“A preliminary report on the treatment of onchocerciasis.” 19 (4), 134–135.

(200b) Of the various drugs tested, euflavine in doses of 10 c.c. apparently cured a high percentage of cases of onchocerciasis, for skin snips taken one and three months after treatment were negative, and symptoms of itching, photophobia and lacrimation had disappeared although no recovery of sight had resulted. In publishing this preliminary note the author deprecates as premature a conclusion that a satisfactory treatment has been established. R.T.L.

201—Farming in South Africa.

- a. VAN DER LINDE, W. J., 1942.—“Eelworm or root gallworm.” 17 (200), 727–736.

(201a) *Heterodera marioni* is indigenous in S. Africa. It is desirable to determine if virgin soils and old lands are naturally infected by first planting a very susceptible crop such as tobacco, tomatoes or cowpeas for at least two months during the summer. When susceptible crops are grown on infested land it is essential that the roots should be pulled out of the soil and burnt. Infected potatoes should be lifted at the early stage before larvae which have

hatched in the tubers are able to migrate into the soil. Seedlings from infected beds frequently spread the disease and the roots should therefore be carefully examined before they are transplanted. The chemical controls which can be applied to seedbeds on sandy or sandy loam soils are: (i) $1\frac{1}{2}$ lb. of sodium cyanide in 4 gallons of water are watered into the seedbed followed by a solution of $2\frac{1}{2}$ lb. of ammonium sulphate dissolved in 4 gallons of water. Both solutions must be watered into the soil until they have soaked in to a depth of one foot. Germination will be poor unless an interval of 3 to 4 weeks has lapsed before seed is sown. (ii) Carbon bisulphide applied to the same area requires about 8 pints, but it is considerably more expensive. Control by agricultural methods requires the fallowing and drying out of infected land, the use of rotational cropping with a series of immune crops over a period of three years combined with the eradication of weeds. Control in infected orchards is exceedingly difficult: here the addition of organic fertilizers is recommended. R.T.L.

202—Gaceta Médica de Caracas.

- a. GONZALEZ RINCONES, R., 1942.—“Posible aplicación de la hipotermoterapia a las parasitosis tropicales.” 49 (1/2), 10-12.

203—Hawaii Medical Journal.

- *a. LIGHTNER, G. H. & PATTERSON, W. B., 1942.—“Trichinosis: report of 4 cases.” 1, 302-303.

204—Indian Farming.

- a. BHALERAO, G. D., 1942.—“Worms and animal diseases.” 3 (8), 438-440.

205—Indian Journal of Medical Research.

- a. RAO, S. S., 1942.—“Observations on filariasis in Lakhipur and Binakandy Tea-Gardens (Cachar district, Lower Assam).” 30 (2), 345-350.

(205a) The endemic filariasis in the 9 villages of the tea-gardens of Lakhipur and Binakandy in Lower Assam is chiefly due to *Wuchereria malayi*. The only filarial lesion present is elephantiasis of the extremities. As compared with previous surveys the infection rate appears to be steady and has not so far spread to neighbouring villages. Those villages situated in the midst of swampy areas have a high filarial incidence while those in the midst of extensively cultivated areas are practically free from infection. In Lakhipur village *bancrofti* and *malayi* infections both occur. R.T.L.

206—Indian Journal of Veterinary Science and Animal Husbandry.

- a. PANDE, P. G., 1942.—“Observations on normal worm burden of goats from certain districts in the United Provinces.” 12 (3), 199-203.

(206a) Pande carried out a survey of the helminth parasites of goats from the Lucknow area of the United Provinces. The intensity and frequency of infection with the various species observed in the 120 goats autopsied are recorded. D.O.M.

207—Indian Medical Gazette.

- a. CHOUDHURY, L. M. & LAHA, P. N., 1942.—“A hydatid cyst of the spleen.” 77 (1), 29-30.
 b. HEILIG, R. & VISWESWAR, 1942.—“Influence of anti-anaemic treatment on the gastric function in hookworm disease.” 77 (7), 385-390.
 c. DUTT, P. C., 1942.—“Tetrachlorethylene as an anthelmintic for tapeworm.” 77 (7), p. 414.
 d. SAHA, U. N., 1942.—“Tetanic convulsions apparently due to ascariasis.” 77 (12), 734-735.

(207b) In 37 cases of hookworm anaemia the blood condition was greatly improved by iron medication without removal of the worms. The improvement in the blood was independent of the gastric acidity. R.T.L.

(207c) Tetrachlorethylene is very cheap, easy to administer, fairly efficient and safe and from experience with 3 cases of *Taenia saginata* it is regarded as worthy of trial in preference to male fern.

R.T.L.

208—Indian Veterinary Journal.

- a. MUDALIAR, S. V., 1942.—“*Agriostomum vryburgi* Railliet, 1902.” 19 (3), 125–128.

(208a) Mudaliar redescribes *Agriostomum vryburgi* and lists the findings of previous authors for comparison.

D.O.M.

209—Jen-Sal Journal.

- a. ANON, 1942.—“Phenothiazine receives official recognition.” 25 (5), p. 8.

- b. WHITLOCK, J. H., 1942.—“A metal stomach tube for the administration of phenothiazine to sheep.” 25 (5), 10–11, 30.

(209a) Phenothiazine has been added to the U.S. National Formulary (7th edit.), with obligatory standards of purity and recommended doses for domesticated animals. Administration as a suspension is preferred.

B.G.P.

(209b) Since the use of a rubber stomach-tube is slow, and that of a drench wasteful, Whitlock recommends for giving phenothiazine suspensions to sheep a straight metal tube 18 inches long, terminating in a $\frac{1}{2}$ -inch ball and at the other end screwing into a dosing syringe. This can readily be passed into the oesophagus, especially if the patient is supine in a level or inclined V-shaped trough.

B.G.P.

210—Journal of Agricultural Research.

- a. ANDREWS, J. S., 1942.—“Stomach worm (*Haemonchus contortus*) infection in lambs and its relation to gastric hemorrhage and general pathology.” 65 (1), 1–18.

- b. SHORB, D. A., 1942.—“Survival of sheep nematodes in pastures.” 65 (7), 329–337.

(210a) This experimental study of haemonchosis in lambs confirms in general the results of previous workers. *Haemonchus contortus* produces a severe and sometimes fatal anaemia. Blood appears in the faeces 6 to 10 days after infection. In those lambs which recovered the anaemia was negatively correlated with the number of eggs per gram of faeces. In those dying before the worms matured the anaemia developed rapidly but owing to the absence of eggs in the faeces a positive diagnosis was impossible. There is no correlation between the number of eggs per gram of faeces and the fatality of the infection. An estimation of the volume of blood lost during 10 days in two fatal cases showed that this was about 2.5 times the original volume as calculated from body weight and compared closely to the amount required to be abstracted from the jugular vein to produce the same degree of anaemia in healthy lambs. That the anaemia of haemonchosis is due wholly to gastric haemorrhage is further indicated by the normal icteric index, the presence of reticulocytes and the histology and gross pathology.

R.T.L.

(210b) By placing worm-free lambs on infected pastures which had been rested for varying periods, Shorb found that, during the summer, it took less than $3\frac{1}{2}$ months and probably only 2 months for such pastures to become free from the pre-parasitic stages of ovine nematodes. He also found that, while there was no development of larvae to the infective stage in late autumn and winter, a few eggs or pre-infective larvae of *Ostertagia* and *Trichostrongylus* did survive and become infective in the following spring.

D.O.M.

211—Journal of the Alabama Academy of Science.

- a. CHRISTENSON, R. O. & CREEL, H. H., 1942.—“Soil temperatures and soil moisture as factors in the seasonal incidence of certain animal parasites in Alabama.” 14, 30–33.

(211a) Christenson & Creel have studied the temperature and humidity of the various types of Alabama soils, and their effects on ova of *Ascaridia galli* and *Heterakis gallinae*. Optimal conditions for the development of ova were found to exist in April and October, so that peaks of infection in fowls are to be expected in June and December.

A.E.F.

212—Journal of Allergy.

- a. BARON, B. & BRUNNER, M., 1942.—“Active sensitization in human beings with *Trichina* antigen.” 13 (5), 459-466.

(212a) Baron & Brunner show that the human skin may become sensitized in the course of a series of skin tests with *Trichina* antigen: the sensitivity may appear following only 3 tests, though most skins needed more. Transfer of serum from such actively sensitized patients to normal skins was followed by sensitization. They point out that the diagnostic value of the cutaneous reaction may therefore have a much reduced value after repeated testing. There seems to be a common factor in the antigens of *Trichina* and *Ascaris*, for they are to some extent interchangeable. P.A.C.

213—Journal of the American Society of Agronomy.

- a. ALBRECHT, H. R., 1942.—“Effect of diseases upon survival of white clover, *Trifolium repens* L., in Alabama.” 34 (8), 725-730.

(213a) Albrecht has made a study of the various pathogenic organisms (mainly fungi) attacking selected strains of white clover, *Trifolium repens* L., growing under field conditions in Alabama. Root knot due to *Heterodera marioni* was found heavily infesting 100 out of 343 strains in one experimental field where most of the affected plants perished. Plants were mainly affected on light soils but not on heavy soils. T.G.

214—Journal of Animal Ecology.

- a. REES, G., 1942.—“The worm burden of sheep on improved and unimproved hill pastures.” 11 (2), 198-204.

(214a) In spite of the heavier stocking with sheep which is possible on improved hill pastures in Wales (4 sheep per acre as against 1.6 on unimproved pastures) the worm burden, as measured by egg-counts, is considerably lower. The author obtained an average of only 321 e.p.g. from the sheep on the improved enclosure and 1,788 e.p.g. from the controls. She suggests that this may be the result of the better health and greater resistance of the sheep on the better quality herbage. D.O.M.

215—Journal of the Council for Scientific and Industrial Research. Australia.

- a. GORDON, H. McL., MONTGOMERY, I. W. & WHITTEN, L. K., 1942.—“The treatment of outbreaks of haemonchosis.” 15 (3), 200-206.

(215a) The authors have studied the efficacy of phenothiazine, carbon tetrachloride and copper sulphate-nicotine mixture against haemonchosis in sheep under outbreak conditions. Phenothiazine showed a marked superiority over the other two drugs and had additional advantages in being effective even when swallowed into the rumen and in destroying immature worms. Even under conditions of re-infestation from heavily contaminated pasture two treatments with phenothiazine would appear to be sufficient to control an outbreak, whereas repeated dosing at short intervals is necessary with other anthelmintics. D.O.M.

216—Journal of the Elisha Mitchell Scientific Society.

- a. ALLEN, C. M., 1942.—“A study of the cytology of *Toxocara cati* Brumpt.” 58 (2), 139-140.

217—Journal of Helminthology.

- a. GOODEY, T., 1942.—“*Brevibucca frugicola* n. sp., a saprophagous nematode found in a rotting peach fruit.” 20 (1/2), 1-5.
 b. GOODEY, T., 1942.—“On *Pungentus thornei* n. sp., a rorylaimid nematode from soil.” 20 (1/2), 6-9.
 c. GOODEY, T., 1942.—“Observations on *Mononchus tridentatus*, *M. brachyuris* and other species of the genus *Mononchus*.” 20 (1/2), 9-24.
 d. CLAPHAM, P. A., 1942.—“On two new coenuri from Africa, and a note on the development of the hooks.” 20 (1/2), 25-31.
 e. CLAPHAM, P. A., 1942.—“On identifying *Multiceps* spp. by measurement of the large hook.” 20 (1/2), 31-40.

- f. FENWICK, D. W., 1942.—“On the lethal effect of sulphur dioxide on eelworm cysts adherent to seed potatoes.” 20 (1/2), 41–50.
 g. FENWICK, D. W., 1942.—“The degree of *Heterodera* infectivity of soil and its determination.” 20 (1/2), 50–66.—

(217a) Goodey describes and figures a second species of the Rhabditis-like genus *Brevibucca* under the name of *B. frugicola* n. sp. The nematodes occurred originally in a rotting peach fruit at Zomba, Nyasaland, whence they were sent for identification in glycerine alcohol. The larvae of the new species formed waving tufts on the surface of the fruit when alive and, in discussing the biology of the worms, it is suggested that they were probably introduced into the fruit on the bodies of visiting flies. T.G.

(217b) Goodey gives an illustrated description of a new dorylaimid nematode, obtained from pasture soil at Winches Farm, under the name of *Pungentus thornei* n. sp. This is the first record of a member of this genus from the British Isles. Females only of the new species have been encountered. The chief anatomical features are described and the differential characters are set out. T.G.

(217c) Goodey presents observations on the detailed anatomy of certain species of the nematode genus *Mononchus*. In the case of *M. tridentatus* he shows that the so called sub-ventral denticles in the basal plates of the buccal cavity are 4 in number, and are not denticles at all but are foramina. In the female gonads he describes a sphincter between each uterus and the swollen end of the oviduct. In the case of the male, he describes the tail in detail, establishing the arrangement of the 7 pairs of caudal papillae and the presence of 4 unicellular ejaculatory glands, on either side of the body, which open laterally into the cloaca. In *M. brachyuris* a large sphincter occurs in each gonad between the uterus and the oviduct whilst in the male there is a pair of ejaculatory glands on either side opening into the cloaca. Sub-ventral foramina, and not denticles, are shown to occur in the two subventral basal plates of the buccal cavity of *M. brachyuris*, *M. muscorum*, *M. punctatus*, *M. papillatus* and *M. minor*. T.G.

(217d) Two new coenuri are described. *Multiceps macracantha* n. sp. from a rat in Rhodesia is characterized by very large hooks with a bifid handle. *Multiceps otomys* n. sp. from a mouse in Pretoria has a hook with a relatively long handle and a band of deeply pitted chitin. Certain stages in the development of the hook are described. The large ones appear to develop from two distinct centres of chitinization. P.A.C.

(217e) It is suggested that the number of species of *Multiceps* can be reduced on morphological grounds, *M. multiceps* apparently embracing *M. serialis* and many of the less well known species. The species probably contains distinct biological strains. *M. radians*, *M. twitchelli*, *M. gaigeri*, *M. macracantha* and *M. otomys* retain their specific identity. P.A.C.

(217f) Fenwick shows that sulphur dioxide is very lethal to potato eelworm cysts, especially under moist conditions. Fumigation of seed potatoes with this chemical resulted in the destruction of cysts adherent to them. No harmful effect on either the tubers or on their chitting power was detected but chits already formed were killed. He therefore recommends that fumigation be carried out prior to chitting. D.F.

(217g) Fenwick describes a technique for measuring the infectivity of soil with *Heterodera schachtii* in terms of the number of larvae potentially capable of infecting plants, per pound of soil. This is considered by him to be more fundamental than any measure based on the number of cysts present per mass of soil. Tables of cyst counts alongside available larvae show the inadequacy of the former as a measure of infectivity. D.F.

218—Journal of Mammalogy.

- a. GOBLE, F. C., 1942.—“*Skrjabinylus chitwoodorum* from the frontal sinuses of *Mephitis nigra* in New York.” 23 (1), 96–97.
 b. GOBLE, F. C. & MURIE, A., 1942.—“A record of lungworms in *Ovis dalli* (Nelson).” 23 (2), 220–221.
 c. GOBLE, F. C., 1942.—“The guinea-worm in a Bonaparte weasel.” 23 (2), p. 221.
 d. GOBLE, F. C., 1942.—“Dog heartworm in the muskrat in New York.” 23 (3), p. 346.

(218a) In the frontal sinuses of a skunk, *Mephitis nigra*, which had been seen running in circles and tumbling about near Schenectady, N.Y., 5 specimens of *Skrjabinylus chitwoodorum* were found at post-mortem. Goble considers it probable that many of the American cases of *Filaroides must. larum* reported from the frontal sinuses belong to the genus *Skrjabinylus*.

R.T.L.

(218c) Two gravid *Dracunculus medinensis*, 230 mm. and 335 mm. in length, were collected from the legs of a *Mustela cicognanii cicognanii* near Diana, Lewis County, N.Y.

R.T.L.

(218d) Three adult males and females of *Dirofilaria immitis* were collected from the right ventricle and pulmonary artery of one out of 12 examples of *Ondatra zibethica zibethica* found in a marsh in Greene County, N.Y.

R.T.L.

219—Journal of Parasitology.

- a. DINABURG, A. G., 1942.—“The efficiency of the Baermann apparatus in the recovery of larvae of *Haemonchus contortus*.” 28 (6), 433-440.
- b. GOBLE, F. C. & COOK, A. H., 1942.—“Notes on nematodes from the lungs and frontal sinuses of New York fur-bearers.” 28 (6), 451-455.
- c. WILLIAMS, C. O., 1942.—“Observations on the life history and taxonomic relationships of the trematode *Aspidogaster conchicola*.” 28 (6), 467-475.
- d. LEVIN, A. J. & EVANS, T. C., 1942.—“The use of roentgen radiation in locating an origin of host resistance to *Trichinella spiralis* infections.” 28 (6), 477-483.
- e. HARKEMA, R., 1942.—“The mourning dove, a new host of the anoplocephalid tapeworm, *Aporina delafondi* (Railliet).” 28 (6), p. 495.
- f. MOORE, D. V., 1942.—“An improved technique for the study of the acanthor stage in certain acanthocephalan life histories.” 28 (6), p. 495.
- †g. FERGUSON, M. S., 1942.—“Development of the metacercariae of *Diplostomum flexicaudum* in the lenses of frogs, turtles, birds, and mammals.” 28 (6), Supplement p. 9.
- †h. CABLE, R. M. & McLEAN, R. A., 1942.—“The occurrence of *Cercaria clausii* Monticelli, a marine rattenkönig cercaria, on the west coast of Florida.” 28 (6), Supplement p. 9.
- †i. STUNKARD, H. W., 1942.—“The life cycle of *Zoogonoides laevis* Linton, 1940.” 28 (6), Supplement pp. 9-10.
- †j. MUELLER, J. F., 1942.—“The dorso-ventral axis in *Taenia pisiformis*.” 28 (6), Supplement p. 10.
- †k. JONES, A. W., 1942.—“*Stempellia moniezi* n. sp., a microsporidian (Protozoa: Sporozoa) parasite of cestodes.” 28 (6), Supplement p. 10.
- †l. SHELANSKI, H. A., PIOUS, W. L. & FRANK, J. H., 1942.—“Intestinal parasitic infections in a State Mental Hospital, and control with aluminum hydroxide and colloidal kaolin.” 28 (6), Supplement pp. 10-11.
- †m. McMULLEN, D. B. & BEAVER, P. C., 1942.—“The life cycles of three dermatitis-producing cercariae (Trematoda: Schistosomatidae).” 28 (6), Supplement pp. 12-13.
- †n. BEAVER, P. C. & McMULLEN, D. B., 1942.—“Methods of investigation on the life cycles of avian schistosomes.” 28 (6), Supplement p. 13.
- †o. HUNTER, W. S., 1942.—“Studies on cercariae of the common mud-flat snail, *Cerithidea californica*. II. General infection data.” 28 (6), Supplement pp. 13-14.
- †p. WRIGHT, W. H. & BOZICEVICH, J., 1942.—“Minimum heat treatment required for the destruction of trichinae in pork scraps in garbage.” 28 (6), Supplement p. 17.
- †q. JONES, M. F. & HOLLAENDER, A., 1942.—“The effect of long ultraviolet and near visible radiation on the eggs of the nematodes, *Enterobius vermicularis* and *Ascaris lumbricoides*.” 28 (6), Supplement pp. 17-18.
- †r. FISCHTHAL, J. H., 1942.—“*Phyllodistomum theostomae* n. sp. (Trematoda: Gorgoderidae) from percid fishes.” 28 (6), Supplement p. 18.
- †s. CANNING, G. A. & FISHER, J. M., 1942.—“Increased mortality in rats with concomitant dual infections.” 28 (6), Supplement p. 18.
- †t. FISCHTHAL, J. H., 1942.—“Number of larvae and time required to produce active immunity in rats against *Trichinella spiralis*.” 28 (6), Supplement p. 19.
- †u. ROSE, H. M. & CULBERTSON, J. T., 1942.—“*Trichinella* skin tests in apparently normal individuals.” 28 (6), Supplement pp. 19-20.
- †v. MELCHER, L. R., 1942.—“Immunological studies on a polysaccharide and protein fraction isolated from *Trichinella spiralis*.” 28 (6), Supplement p. 20.
- †w. STOLL, N. R., 1942.—“Active immunization of sheep against large single test infections of *Haemonchus contortus*.” 28 (6), Supplement p. 20.
- †x. MAYHEW, R. L., 1942.—“Some preliminary experiments on a skin test for immunity to the stomach worm *Haemonchus contortus* in the calf.” 28 (6), Supplement p. 20.

† Abstract of a paper prepared for the eighteenth Annual Meeting of the American Society of Parasitologists, New York, December 28, 29 and 30, 1942.

- †y. OLIVIER, L., 1942.—“Acquired resistance to the gapeworm *Syngamus trachea* in the turkey and ring-necked pheasant.” 28 (6), Supplement pp. 20–21.
- †z. CULBERTSON, J. T. & ROSE, H. M., 1942.—“Skin tests in *Schistosomiasis mansoni* patients with antigen from *Pneumonoecus medioplexus*.” 28 (6), Supplement p. 21.
- †ba. FALLIS, A. M., 1942.—“Resistance to *Ascaris lumbricoides* L. in guinea pigs and the eosinophilia associated with infection.” 28 (6), Supplement p. 21.
- †bb. LARSH, jr., J. E., 1942.—“The relation of splenectomy and the resistance of old mice to the mouse cestode, *Hymenolepis nana* var. *fraterna*.” 28 (6), Supplement pp. 21–22.
- †bc. EISENBRANDT, L. L., 1942.—“The effect of *Ascaris suum* extract injections upon chickens infected with *Ascaridia lineata*.” 28 (6), Supplement p. 22.
- †bd. ANDREWS, J. S., KAUFFMAN, W. R. & DAVIS, R. E., 1942.—“Effects of the nematode, *Trichostrongylus colubriformis*, on the nutrition of lambs.” 28 (6), Supplement pp. 22–23.
- †be. SCOTT, J. A. & ANDREWS, J., 1942.—“The magnitude of the hookworm problem in a typical county of Southern Georgia.” 28 (6), Supplement pp. 23–24.
- †bf. STEVENSON, R. T., 1942.—“Use of calcium chloride to isolate helminth ova from soil.” 28 (6), Supplement p. 24.
- †bg. KUITUNEN, E., 1942.—“Phenothiazine in the treatment of enterobiasis.” 28 (6), Supplement p. 24.
- †bh. GUTHRIE, J. E. & HARWOOD, P. D., 1942.—“The efficacy of phenothiazine and nicotine-bentonite for the removal of *Heterakis gallinae* and *Ascaridia galli* from chickens.” 28 (6), Supplement pp. 24–25.
- †bi. RAPPAPORT, I., 1942.—“The pathogenicity of three strains of *Trichinella spiralis* as indicated by lethal dose and survival time.” 28 (6), Supplement pp. 26–27.
- †bj. THRELKELD, W. L., 1942.—“Tests for a hemolytic substance in *Chabertia ovina*.” 28 (6), Supplement p. 27.
- †bk. BRAND, T. VON, 1942.—“Factors influencing the oxygen consumption of a larval *Eustrongylides*.” 28 (6), Supplement p. 27.
- †bl. BYRD, E. E. & WARD, J. W., 1942.—“The segmental anatomy of *Mesocostoides variabilis* Mueller, 1928, from *Didelphis virginiana* Kerr.” 28 (6), Supplement p. 28.
- †bm. BYRD, E. E. & WARD, J. W., 1942.—“Notes on the genital system of the bird fluke, *Apharyngostroigea cornu* (Zeder).” 28 (6), Supplement p. 28.
- †bn. WALTON, A. C., 1942.—“The parasites of the Caeciliidae (Amphibia: Apoda).” 28 (6), Supplement pp. 28–29.
- †bo. WALTON, A. C., 1942.—“The parasites of the Cryptobranchoidea (Amphibia: Caudata).” 28 (6), Supplement p. 29.
- †bp. WALTON, A. C., 1942.—“The parasites of the Ambystomoidea (Amphibia: Caudata).” 28 (6), Supplement p. 29.
- †bq. LUTTERMOSER, G. W., 1942.—“The possibility of chemical control of the snail intermediate hosts of *Schistosoma mansoni* in Venezuela. II.” 28 (6), Supplement pp. 29–30.
- †br. GUSTAFSON, P. V., 1942.—“A peculiar larval development of *Rhabdochona* spp. (Nematoda: Spiruroidea).” 28 (6), Supplement p. 30.

(219a) Using infective larvae of *Haemonchus contortus* in Baermann's technique, Dinaburg finds that inconsistent operation of the apparatus is the factor most responsible for variability in results between experiments when more than 600 larvae are used. R.T.L.

(219b) This paper summarizes the parasitological findings in the lungs and frontal sinuses of wild trapped fur-bearing animals in the State of New York during a period of 3 years. The helminths recorded are *Capillaria aërophila*, *Skrjabinogylus nasicola*, *S. chitwoodorum*, *Filaroides bronchialis* and *Crenosoma* spp. R.T.L.

(219c) Williams has studied the hatching of the eggs and the developmental stages of *Aspidogaster conchicola* in the same host. These studies add support to the view of Faust & Tang that this parasite represents a subclass intermediate between Monogenea and Digenea which is named *Aspidogastrea*. R.T.L.

(219d) Levin & Evans present data which show that the passage of *Trichinella* larvae through the vascular system and invasion of muscle are not essential for the production of resistance to a second infection with *Trichinella spiralis*. Before rats were infected the *Trichinella* larvae were treated with X-ray (3,250 r to 3,750 r). These larvae survived and became adult in the intestine but failed to produce offspring. Yet this intestinal infection induced strong host resistance to a second infection with non-radiated larvae. The possibilities of an application of this technique to the study of host resistance mechanisms in other parasitic-infections is stressed. R.T.L.

† Abstract of a paper prepared for the eighteenth Annual Meeting of the American Society of Parasitologists, New York, December 28, 29 and 30, 1942.

(219f) Several modifications to increase the efficacy of Manter's method of inducing the hatching of acanthocephalan eggs by drying and re-wetting of eggs from the body cavity of a mature female are described. Moore replaces the plain water for re wetting by a solution of neutral red (10 drops of saturated solution in 20 c.c. of neutral distilled water). It has the advantage of staining the larvae. Eggs from the faeces of infected animals fail to hatch by either method. R.T.L.

(219g) The cercariae of *Diplostomum flexicaudum* were able to penetrate the eye and grow in the lens of frogs, tadpoles, turtles, chicks, ducklings and laboratory mice, rats, guinea-pigs and rabbits, and they were, in appearance and behaviour, similar to those found in the eyes of fishes. Blindness resulted in many cases. Although the possibility of the disease in man is rather remote it may exist. R.T.L.

(219h) The adult of *Cercaria clausii* probably belongs to Lepocreadiidae or Gyliuchenidae. The occurrence of a pharynx excludes it from *Phyllodistomum*, suggested by Odhner. R.T.L.

(219i) *Mitrella lunata* is the first and *Nereis virens* the second intermediary of *Zoogonoides laevis*. Young adults were obtained by experimental feeding to *Tautoga onitis*. R.T.L.

(219j) Neither the relationship of the excretory canals to each other nor the orientation of the dorso-ventral axis is constant throughout the strobila. It is impossible to differentiate the dorsal from the ventral surface of the strobila in *Taenia pisiformis*. R.T.L.

(219k) In the parenchyma of *Hymenolepis anthocephalus* and of *Diorchis reynoldsi* from the shrew, *Blarina brevicauda*, spores of *Stempellia moniezi* (Nosematidae) were found, but are regarded as accidental and probably normally present in some larval insect. R.T.L.

(219l) In a patient with a markedly high eosinophilia, a suspension of aluminium hydroxide and colloidal kaolin in three one ounce doses daily for 3 to 4 weeks caused the disappearance from the faeces of eggs of *Oxyuris vermicularis*, *Ascaris lumbricoides*, *Strongyloides stercoralis* and *Hymenolepis nana*. *Trichuris* alone persisted. R.T.L.

(219m) Adult schistosomes were produced experimentally in birds after 8 to 25 days from *Cercaria stagnicola*, *C. elvae* and *C. physellae*. *C. stagnicola* and *C. elvae* were *Trichobilharzia*, while *C. physellae* belongs to *Pseudobilharzia*. R.T.L.

(219n) Taking advantage of the negative geotropism and positive phototropism of the cercariae of avian schistosomes, a simple technique has been devised to collect these in quantity. The adults were more readily collected when the blood vessels were injected with 1% sodium citrate in physiological salt solution immediately after the host was killed. R.T.L.

(219o) This is a detailed study of the cercarial fauna of 3,934 specimens of *Cerithidea californica* at Anaheim Slough, California. Infections occurred in 32.6%. 33% were pleurolophocercous cercariae, 18% echinostome cercariae, 18% xiphidiocercariae and 6.5% were furcocercous cercariae. 5.5% of the infected snails showed multiple infections. R.T.L.

(219p) The boiling of garbage for 30 minutes in an open container destroyed *Trichina* larvae in pieces of pork up to 3 inches in thickness. R.T.L.

(219r) *Phyllodistomum etheostomae* n. sp. was collected from *Hadropterus maculatus* and *Percina caprodes semifasciata*. Its nearest relatives are *P. brevicecum* and *P. pearsei*. R.T.L.

(219s) When white rats had been inoculated with *Trypanosoma lewisi* on the same day as they had received a sub-lethal dose of *Trichinella spiralis*, they died on or about the 14th day after infection. R.T.L.

(219t) A single small dose of *Trichinella* larvae produces immunity in approximately 14 days and this is effective against the intestinal forms. R.T.L.

(219u) Precipitin tests indicate that a significant proportion of apparently healthy young individuals have had sub-clinical trichinosis. R.T.L.

(219v) A nitrogen-free nondialyzable polysaccharide fraction, isolated from *Trichinella spiralis* larvae, gave a Molisch reaction in extremely high dilutions. It was precipitinogenic in high dilutions but did not act as a skin test antigen except in large amounts (0.5 to 1.0 mgm.). A protein fraction obtained by alkali extraction of the whole worm and purified by acid precipitation of non-reactive substances was both precipitinogenic and induced positive reactions in high dilutions. R.T.L.

(219w) A single intraperitoneal or subcutaneous injection of sterilized exsheathed infective larvae of *Haemonchus contortus* gave protection when 0 to 11 weeks afterwards lethal doses of larvae were administered in a single dose. R.T.L.

(219x) In immune animals a swelling is produced at the site of injection with a saline extract of adult *Haemonchus contortus*. Non-resistant and infected animals give no reaction. R.T.L.

(219y) Experiments with *Syngamus trachea* show that resistance to re-infection by turkeys and pheasants is not due to the presence of large numbers of adult worms and that it may persist after the worms have been lost. R.T.L.

(219z) A wheal 1.5 to 3 cm. in diameter, with distinct pseudopodia, was produced immediately in 3 patients having *Schistosoma mansoni*, when skin-tested with 0.1 c.c. extract of powdered *Pneumonoeces medioplexus*. Even when this extract was diluted 200 times a skin response was elicited. Cases previously treated (1 to 6 years) with antimony compounds still gave a slight reaction. The extract resisted boiling for 10 minutes and retained activity after being autoclaved. The substance responsible was soluble in water but not in alcohol or ether. R.T.L.

(219ba) Guinea-pigs are rendered almost completely resistant to *Ascaris lumbricoides* infection when fed with heavy doses of infective *Ascaris* eggs and remain partially resistant for at least 15 weeks. R.T.L.

(219bc) Injections of *Ascaris suum* extract not only failed to increase the resistance of chickens to *Ascaridia lineata* but actually lowered it. R.T.L.

(219be) "For the first time an attempt has been made to visualize the [hookworm] problem on a family basis" and statistical methods have been developed to make possible a simple expression of its significance in terms which can be understood by the layman. R.T.L.

(219bf) The usual methods for recovering ova from soil having given erratic results with *Toxocara canis*, CaCl_2 (sp. gr. 1.35 to 1.40) was found to be consistently better than ZnSO_4 of the same specific gravity or N.Cl (sp. gr. 1.20). Previous soaking of soil samples in 1% solution of CaCl_2 overnight, or in 10% solution for at least one hour, gave even better results. Screening off the coarse debris and the removal of trapped air in the soil by vacuum pump greatly facilitated microscopical examination. The author adds that hookworm ova disintegrate rather rapidly in this solution. R.T.L.

(219bg) In approximately 95% of 300 children and adults treated for enterobiasis by one course of phenothiazine covering 5 to 6 days, repeated NIH swabs have failed to show evidence of infection. The drug was given, without laxative, mixed with food or orange juice. The dosage for adults was 9 g. given at the rate of 1.5 g. daily; for children between the ages 9 to 11 the total given was 7.5 g.; between ages 6 to 8 it was 6 g. and for ages 2 to 5 it was 5 g. The daily dose for children was 1 g. R.T.L.

(219bh) In experiments made on brown Leghorn cockerels, tablets containing 33 parts of phenothiazine, 66 parts of nicotine-bentonite and 1 part sodium stearate eliminated 83.7% of *Heterakis* and 96.2% of *Ascaridia*. Phenothiazine alone removed 89.9% *Heterakis* and 48.2% *Ascaridia*, and nicotine-bentonite removed 10.1% *Heterakis* and 85.2% *Ascaridia*. Commercial phenothiazine was more effective than micronized phenothiazine in eliminating *Heterakis*. Heavy dosage with phenothiazine resulted in loss of weight. R.T.L.

(219bi) Little or no difference was discovered in the virulence of 3 strains of *Trichinella spiralis* administered to mice in overwhelming doses. R.T.L.

(219bj) Preliminary experiments indicating that a haemolytic substance can be obtained from adult *Chabertia ovina* are to be repeated. R.T.L.

(219bl) The authors state that certain features in the anatomy of *Mesocestoides variabilis* segments have been clarified but no details are given in this abstract. R.T.L.

(219bm) The authors give in this abstract no details of their results. R.T.L.

(219bn) According to Walton 6 species of nematodes are listed in 6 hosts and 2 species of trematodes in 2 hosts as having been recorded. R.T.L.

(219bo) The helminth parasites recorded for the Cryptobranchoidea are listed. R.T.L.

(219bp) The helminth parasites recorded for the Ambystomoidea are listed. R.T.L.

(219bq) A 1 in 1,000 solution of recently slaked lime (about 50% purity) kills the snail intermediary of *Schistosoma mansoni*. The snail eggs fail to develop after remaining for 6 to 24 hours in this solution. The schistosome cercariae are also killed in 15 to 30 minutes. In a field experiment carried out near Caracas the application of slaked lime every 2 or 3 months kept the experimental area practically free from snails for 6 months at a low expenditure. R.T.L.

(219br) The larval development of several species of Rhabdochona takes place in mayfly nymphs. After encystment, development may continue and males and females may precociously reach sexual maturity within the intermediate host. R.T.L.

220—Journal of the South African Veterinary Medical Association.

- a. FOURIE, J. M., 1942.—“A note on acute verminosis in cattle in a semi-arid area.” 13 (3), 70–72.

(220a) Fourie discusses the causes of clinically severe infections with *Haemonchus contortus* in young cattle in a semi-arid area in South Africa. It appears that the outbreaks were associated with marshy “vlei” with deep pools which retained water well into the winter after heavy rains early in the year. R.T.L.

221—Journal of Tropical Medicine and Hygiene.

- a. HEILIG, R. & VISWESWAR, A., 1942.—“Iron-refractory anaemia in hookworm disease.” 45 (15), 113–116.
b. CAWSTON, F. G., 1942.—“Schistosomiasis among natives in the Natal sugar belt.” 45 (15), 116–118.

222—Journal of the University of Bombay. Section A. Physical Sciences.

- a. PARANJPE, K., PHALNIKAR, N. L. & NARGUND, K. S., 1942.—“Synthetical anthelmintics. Part IV. Synthesis of lactones similar to desmotroposantonin.” New Series, 11 (3), 124–126.
b. TRIVEDI, J. J. & NARGUND, K. S., 1942.—“Synthetical anthelmintics. Part V. γ -p-alkoxyphenyl butyrolactones.” New Series, 11 (3), 127–130.

223—Journal of the University of Bombay. Section B. Biological Sciences.

- a. INAMDAR, N. B., 1942.—“A new species of avian cestode from India.” New Series, 11 (3), 77–81.

(223a) Inamdar describes and figures *Shibleyia farrani* n. sp. from the intestine of the black-winged stilt, *Himantopus himantopus*. The new species is distinguished from *S. inermis*, the only other member of the genus, by the difference in the arrangement of the genital pores. A.E.F.

224—Journal-Lancet.

- a. FAUST, E. C., 1942.—“Is there an intestinal parasite problem in college students?” 62 (7), 260–264.

225—Kühl- und Schlachthofwesen.

- *a. NIKOLTSCHIEFF, K., 1942.—[*Cysticercus cellulosae* in pigs in Bulgaria.] 10 (1/2), 3–23. [In Bulgarian.]

(225a) The distribution of *Cysticercus cellulosae* in individual organs and muscles of 200 naturally infected pigs ranged from 92% to 100% in the muscles of the neck, breast and psoas muscles to 54% in the muscles of the back. The brain was infected in 52%, the eye muscles in 32.5% and the eyelids in 5%. In one case cysticerci were found in the vitreous humour. [From an abstract in Tierärztl. Rdsch., 48, p. 307.] R.T.L.

226—Lancet.

- a. HUMPHREYS, D. R., 1942.—“Death from phenothiazine poisoning.” Year 1942, 2 (6202), 39–40.
- b. ROSS, D. F., 1942.—“Chronic diarrhoea due to *Trichocephalus trichiurus*.” Year 1942, 2 (6204), 97–98.

(226a) This is a very slightly fuller report of a case published previously in the Lancet [see Helm. Abs., Vol. XI, No. 15a].

B.G.P.

(226b) An unusually heavy infestation with whipworm is reported in a patient in the Aberdeen Royal Infirmary. The blood showed a hypochromic microcytic anaemia with 56% haemoglobin, red cells 3,540,000, white cells 7,300 per c.mm., and eosinophils 13%, 4 to 6 semi-liquid stools were passed daily and there was pain and tenesmus. Treatment with hexylresorcinol resulted in the passage of over 1,000 whipworms. An unusual feature was the location of worms in the lowest 9 inches of the bowel as revealed by the sigmoidoscope.

R.T.L.

227—Leaflet. United States Department of Agriculture.

- a. SARLES, M. P. & FOSTER, A. O., 1942.—“Nodular worm disease of sheep.” No. 228, 6 pp.

228—Medica, Matanzas.

- *a. GARCÍA HERNÁNDEZ, R., 1942.—“Fasciola hepática.” 1, 75–81.

229—Medical Parasitology and Parasitic Diseases.

- a. KHOKHOLKOVA, N. A., 1942.—[Opisthorchiasis in Kazakhstan.] 11 (1/2), 57–60. [In Russian.]
- b. HEFTER, V. A., 1942.—[Comparison of laboratory methods for the diagnosis of strongyloidiasis.] 11 (1/2), 60–64. [In Russian.]
- c. MIRETSKI, O. Y., 1942.—[Use of methylene blue in determining the viability of helminths. I. *Rhabdias nigrovenosum*.] 11 (1/2), 64–68. [In Russian.]
- d. VOPLENKO, V. V., 1942.—[An imported case of opisthorchiasis in man in Siazan, Azerbaïdzhán.] 11 (1/2), 98–99. [In Russian.]

(229b) After experimenting with various methods for the diagnosis of strongyloidiasis in man, Hefter concludes that the Baermann technique is by far the most reliable. A.E.F.

(229c) Miretski has found that an aqueous solution of methylene blue at a concentration of 1 : 1,000 is injurious to larvae of *Rhabdias nigrovenosum*, about 50% of a given batch of larvae being destroyed in 2 hours. Living larvae are, however, not stained by methylene blue solutions of 1 : 25,000 to 1 : 50,000 strength whereas dead ones are, and treating larvae with such dilute solutions may be used as a test for their viability. T.G.

230—Medicina. Madrid.

- *a. FERNÁNDEZ-RUIZ, C. & BUJEDO, A., 1942.—“Embarazo extrauterino y quistes hidatídicos de intestino y epiplón.” 10, 238–241.

231—Medicina Española.

- a. HORNO LIRIA, R., 1942.—“Tres casos de equinococosis genital femenina.” 7 (36), 58–64.

232—Medicina Moderna. Valparaiso.

- a. TALLMAN, E., 1942.—“Quistes hidatídicos del riñón.” 15 (7), 330–334.

233—Memorias do Instituto Oswaldo Cruz.

- a. LENT, H. & FREITAS, J. F. TEIXEIRA DE, 1942.—“Sobre *Dipetalonema spiralis* (Molin, 1860) (Nematoda, Filarioidea).” 37 (3), 383–389. [English summary p. 388.]

(233a) Lent & Freitas redescribe *Dipetalonema spiralis* from *Choloepus didactylus*. A few of the males showed asymmetry in the distribution of the cervical papillae but there were no variations in the caudal papillae. The females showed a certain amount of variation in the curvature of the ovijector. P.A.C.

234—Memorias de la Sociedad Cubana de Historia Natural "Felipe Poey".

- a. PÉREZ VIGUERAS, I., 1942.—"*Athesmia parkeri* n. sp. (Trematoda, Dicrocoeliidae) parásito del intestino de *Artibeus jamaicensis parvipes* (Chiroptera)." 16 (1), 67-69.

235—Nassau County Farm and Home Bureau News.

- a. CHITWOOD, B. G., CLEMENT, R. L. & GORDON, F. L., 1942.—"Nematode diseases of potatoes." 28 (10), 2-3.

(235a) Chitwood et al. discuss the two root eelworms, *Heterodera marioni* and *H. rostochiensis*, as parasites of potatoes, particularly as they affect this crop in Long Island. *H. marioni* is well known as a widespread pest of potatoes and is most frequently spread by the planting of infected tubers as seed. *H. rostochiensis*, which is given the popular name of "the golden nematode", has only recently been discovered affecting potatoes in 14 fields totalling 419 acres. The authors point out the chief differences between the two parasites and indicate that whereas *H. marioni* infests a wide range of crops and weeds, *H. rostochiensis* infects only potatoes and tomatoes among cultivated crops. They suggest various control measures. T.G.

236—New England Journal of Medicine.

- a. ANON, 1942.—"Case records of the Massachusetts General Hospital. Case 28132. [Hydatidosis of the liver]." 226 (13), 538-540.

237—New York State Journal of Medicine.

- a. LEONE, V. D., 1942.—"Hydatid cyst of pelvis with intracapsular hemorrhage and anaphylactic shock, with recovery." 42 (16), 1585-1586.

238—North American Veterinarian.

- a. ANON, 1942.—"Nodular disease and surgical sutures." 23 (11), 692, 694.

239—Nuova Veterinaria.

- a. MARCATO, A., 1942.—"Il midollo osseo nella distomatosi epatica dei bovini." 20 (11), 219-223.
b. ROMBOLI, B., 1942.—"Infestione da *Tetrameres fissispina* nel piccione domestico." 20 (11), 228-234.

(239a) Marcato has examined the changes that occur in the bone marrow and peripheral blood of bovines infested with *Fasciola hepatica*. In the bone marrow there is a great increase in the production of polymorphonuclears, eosinophiles, neutrophiles and of erythrocytes. This is not always reflected in the circulating blood for cases of eosinophilia are rare: usually there is a diminution in the number present. The neutrophiles often show an increase as do lymphocytes occasionally. Immature erythrocytes are often thrown into the circulating blood. P.A.C.

(239b) *Tetrameres fissispina* was the cause of death of a large number of pigeons in Pisa. They were extremely thin and digestion had been much upset by the presence of the parasites. They were located in the acini of the glandular stomach with marked inflammatory changes, followed by thickening and fibrosis. P.A.C.

240—Pamphlet. South African Biological Society.

- a. ORTLEPP, R. J., 1942.—"Die belangrikheid van 'n biologiese studie van ons parasitêre wurms." [Presidential address for 1940 to the South African Biological Society.] No. 11, 9-18.

241—Parasitology.

- a. STEPHENSON, W., 1942.—"On the culturing of *Rhabditis terrestris* n. sp." 34 (3 4), 246-252.
b. STEPHENSON, W., 1942.—"The effect of variations in osmotic pressure upon a free-living soil nematode." 34 (3 4), 253-265.

- c. DAWES, B., 1942.—“A new name for *Styphlodora compactum* Dawes, 1941, a criticism of the proposed new genus *Paurophyllum* Byrd, Parker & Reiber, 1940, and a revised key for the separation of species of the genus *Styphlodora* Looss, 1899.” 34 (3/4), 266-277.

(241a) Stephenson describes and figures *Rhabditis terrestris* n. sp. obtained originally from a rotting earthworm. As a culture medium for the study of the factors influencing growth a broth was made of boiled earthworms. This was sterilized and suitably diluted to obtain the optimal conditions for growth. Variations in the size and relative dimensions of the worms by varying the culture medium are described and discussed, as are also the questions relating to bacteria and the cysts of a flagellate protozoan as sources of food. T.G.

(241b) Stephenson has studied the behaviour of *Rhabditis terrestris* in response to varying environmental conditions, particularly in media of lower and higher osmotic pressure than the normal culture medium. Changes in body length, in the appearance and behaviour of the oesophagus and intestine and in motility were chiefly investigated. Evidence is presented to show that the main aqueous exchange of fluids occurs through the cuticle, which is permeable, and that control of the exchange probably lies in the cellular hypodermis which functions in an osmo-regulatory fashion. The changes observed under hypotonic and hypertonic conditions are fully described and discussed. T.G.

(241c) Dawes revises the recent species of the genus *Styphlodora*, and the homonym *S. compactum* Dawes is renamed *S. compressa* nom. nov. The genus *Paurophyllum* is found to be synonymous with *Styphlodora*. Tabular comparisons showing overlapping size-criteria support his arguments for the following nomenclatural changes: *S. bascaniensis* Goldberger (syn. *S. compactum* Byrd, Parker & Reiber); *S. magna* Byrd & Denton (syn. *S. natricis* B. & D.); *S. floridanis* B., P. & R. (syn. *S. agkistrodantis* B., P. & R.); *S. horridum* (Leidy) (syn. *S. lachesidis* MacCallum); *S. simplex* (B., P. & R.) n. comb. (syns. *P. simplex* B., P. & R., *P. megametricus* B., P. & R., *S. aspina* B., P. & R.). The new key includes 16 species, but of these *S. magna* may be a large form of *S. bascaniensis*, and *S. floridanis* may prove to be synonymous with *S. simplex*—the observed differences being due to different rates of growth of the various organs during the growth of the body. N.G.S.

242—Post-Graduate Medical Journal.

- a. HOWARD, S., 1942.—“Rare appearance of *Clonorchis sinensis* in England.” 18 (200), 125-127.

(242a) Clinical details are given of a case of jaundice from which a fluke was removed during operation. The patient, a woman of 50 years of age, had resided all her life in South Wales and in England. Eggs were present in the faeces. The eggs and adults are diagnosed as belonging to *Clonorchis sinensis* and the diagnosis is supported by a text figure reproduced, not from the specimen, but from an American textbook of parasitology. [But the case is one of *Fasciola hepatica*.] R.T.L.

243—I. ensa Médica Mexicana.

- * BALANZARIO, I., 1942.—“La oncocercosis y el síndrome epiléptico.” 7, 62-64.

244—Presse Médicale.

- a. ALLAINES, F. d', LAVIER, G. & GANDRILLE, 1942.—“Une petite épidémie de distomatose hépatique à *Fasciola hepatica* diagnostiquée rétrospectivement.” 50 (52), 738-739.

(244a) The authors describe three cases of human infestation with *Fasciola hepatica*. The infestations were apparently of long standing, having probably been contracted 9 years earlier at La Baule in Brittany. Within a short while all the patients had shown symptoms of acute hepatic toxæmia and a considerable eosinophilia. These symptoms later disappeared spontaneously to be followed after 9 years with symptoms of biliary obstruction. The eosinophilia had decreased. Eggs of *F. hepatica* were found in the stools. The degree of clinical symptoms varied considerably among the three women. Surgical treatment was used and one case showed a heavy infestation with many superficial nodules and fibrosis—a condition frequently described among domestic animals but only rarely recorded in man.

The duration of the infestation is an important point to notice, it being contrary to the opinion passed by many helminthologists. The symptoms of the patients have been relieved by treatment but they are still passing viable eggs. P.A.C.

245—Proceedings of the American Society for Horticultural Science.

- a. ROMSHE, F. A., 1942.—“Nematode resistance test of tomatoes.” 40, p. 423.

(245a) Field tests for resistance to root-knot caused by *Heterodera marioni* were made with *Lycopersicon esculentum*, *L. peruvianum* and *L. pimpinellifolium*, some crosses between these species and a large number of varieties of tomato. The plants were dug after two months' growth in heavily infested land and the roots were examined for root-knot. All were badly damaged except for the 10 lots of *L. peruvianum*, of which one was slightly galled and 9 entirely free from galls, and the 10 plants of *Physalis pubescens* were also practically free from nematode injury. M.T.F.

246—Proceedings of the Indian Academy of Sciences. Section B.

- a. BHALERAU, G. D., 1942.—“Some metacercarial forms of Clinostomatidae (Trematoda) from India.” 16 (3), 67-71.
b. SINHA, B. B., 1942.—“Studies on the trematode parasites of reptiles. Part I. A new trematode, *Acanthostomum indicum* belonging to the family Acanthostomidae, from the intestine of a crocodile.” 16 (3), 86-90.

(246a) Bhalerao gives short descriptions of some clinostomid metacercariae from Indian fishes: *Euclinostomum indicum* n. sp. from *Ophiocephalus punctatus*, *Clinostomum prashadi* n. sp. from an unidentified fish, *C. dasi* n. sp. from *Saccobranchius fossilis*, *C. gideoni* n. sp. from *Barbus sephre*, and *C. piscidium* Southwell & Prasad from *Nandus nandus*. N.G.S.

(246b) Sinha describes a new trematode from the intestine of an unnamed Indian crocodile. *Acanthostomum indicum* n. sp. is related to *A. burminis* (Bhalerao), but is distinguished from it by having the gonads confined to the extreme posterior end of the body, and in certain other details. N.G.S.

247—Proceedings of the Indiana Academy of Science.

- a. HEADLEE, W. H., 1942.—“The prevalence of pinworm infections among residents of Indiana.” [Abstract.] 51, 265-266.

(247a) Headlee examined stools from 10 groups of residents in Indiana, numbering 2,970 in all, by smear and centrifugal concentration methods. The incidences of pinworm obtained varied between 0.0% and 7.4% in 9 groups and was even 33.3% in one group of 15 persons. Another group of 80 persons was examined by the peri-anal scraping method and 11, or 13.75%, were found to be infected. M.R.Y.

248—Proceedings of the Linnean Society of New South Wales.

- a. JOHNSTON, T. H. & MAWSON, P. M., 1942.—“Some new and known Australian parasitic nematodes.” 67 (1/2), 90-94.

(248a) A collection of nematodes from various Australian birds, frogs and reptiles includes five new species, viz., *Physaloptera confusa* n. sp. from *Notechis scutatus*, *Gongylonema alecturae* n. sp. from *Alectura lathamii*, *Vagrifilaria australis* n. sp. from *Centropus phasianus*, *Contracaecum eudyptulae* n. sp. from *Eudyptula minor*, and *Pharyngodon limnodynastes* n. sp. from *Limnodynastes dorsalis dumerilii*. The status of *Physaloptera antarctica* v. Linstow is clarified. R.T.L.

249—Proceedings of the Society for Experimental Biology and Medicine.

- a. SENEKJIE, H. A. & SCOTT, L. C., 1942.—“Studies on the microcataphoresis of animal parasites.” 51 (1), 174-175.

(249a) Senekjie & Scott report that the eggs of *Ascaris lumbricoides*, *Trichocephalus trichiurus* and *Ancylostoma caninum* drift towards the positive pole of a cataphoresis cell

(350 volts and a constant but unknown milliamperage). Filariform larvae of *Strongyloides* sp. also drifted to the positive pole. Hyaline changes occurred in the larvae after 45 minutes and death resulted in 2 hours. *Trichinella spiralis* larvae acted similarly but, though they became immobile after 20 minutes, they recovered when the current was stopped. W.P.R.

250—Publicaciones Miscelaneas. Ministerio de Agricultura de la Nación. Dirección de Propaganda y Publicaciones. Buenos Aires.

- a. CASÓS, G. A., 1942.—“Teniasis de los ovinos (lombrices grandes o lombrices solitarias).” No. 118, 8 pp.

251—Records of the Australian Museum.

- a. JOHNSTON, T. H. & MAWSON, P. M., 1942.—“The Gallard collection of parasitic nematodes in the Australian Museum.” 21 (2), 110-115.

(251a) A small collection of Australian nematodes is described. It includes *Pharyngostromylus gallardi* n. sp. from *Macropus ualabatus*, *Pharyngodon australis* n. sp. from *Tiliqua scincoides*, *Ophidascaris pyrrhus* n. sp. from *Pseudechis porphyriacus*, *Porrocaecum menurae* n. sp. from *Menura novae hollandiae*, and *Physaloptera gallardi* n. sp. from *Amphibolurus barbatus*. R.T.L.

252—Report of the Management Committee, Alan, Duke of Northumberland Memorial Fund.

- a. STEWART, W. L., 1942.—“Research work into sheep and lamb diseases. With a report on grass sickness in horses.” 8th Report, 31 pp.

(252a) This report includes a brief account of an experiment from which it is concluded that lambs benefited in body-weight from the administration of 15 g. of phenothiazine supplemented by minerals. While pastures treated with basic slag, etc., improve considerably in appearance there is often no corresponding improvement in the condition of sheep grazing thereon and the incidence of parasitic diseases and unthriftiness in lambs often increases. On these grounds it is suspected that there is an association between nutritional deficiency and susceptibility to parasitic disease. R.T.L.

253—Revista Brasileira de Biologia.

- a. LENT, H. & FREITAS, J. F. TEIXEIRA DE, 1942.—“Contribuição ao conhecimento dos filarídeos de dasipodídeos.” 2 (3), 275-280.
 b. FREITAS, J. F. TEIXEIRA DE & LENT, H., 1942.—“Primeira espécie de *Capillaria* parasita de batráquio sul-americano (Nematoda: Trichuroidea).” 2 (3), 325-330.
 c. TRAVASSOS, L., 1942.—“Novo Dicrocoeliidae parasito de carnívoros: *Pseudathesmia paradoxa* n.g., n. sp., com uma nota sobre o gênero *Athesmia* Looss, 1899.” 2 (3), 349-351.
 d. TRAVASSOS, L., 1942.—“Contribuições ao conhecimento dos Schistosomatidae. Sobre *Ornithobilharzia canaliculata* (Rudolphi, 1819).” 2 (4), 473-476.

(253a) *Dipetalonema anticlava* (Molin, 1858) n. comb. is described and illustrated from *Dasyus gilvipes* and other hosts. R.T.L.

(253b) *Capillaria recondita* n. sp. is described and illustrated from *Crossodactylus gaudichaudii* in Brazil. A systematic list of the batrachians which have been examined for parasites at the Instituto Oswaldo Cruz is appended. R.T.L.

(253c) Travassos gives a formal description of *Pseudathesmia paradoxa* n. g., n. sp. from *Cerdocyon thous* in Brazil. In general features the new genus resembles *Dicrocoelium* but it has the arrangement of the yolk glands characteristic of *Athesmia*. R.T.L.

(253d) Travassos redescribes *Ornithobilharzia canaliculata*, a parasite of *Larus dominicanus* and of *Sterna* sp., which was incompletely known. It inhabits the portal system, passing its eggs through into the intestine and producing lesions similar to those of *Schistosoma mansoni* in man. Morphological details of the species are described and figured. P.A.C.

254—Revista de Cirugía de Buenos Aires.

- a. NOSIGLIA, M. R., 1942.—“Quiste hidatídico calcificado del bazo.” 21 (3), 66–96.

255—Revista del Instituto Bacteriológico del Departamento Nacional de Higiene. Buenos Aires.

- a. PIROSKY, I., PIROSKY, R. DE & CASIRAGHI, J. C., 1942.—“Hipersensibilidad de infestación en la hidatidosis del hombre.” 11 (1), 94–98.
 b. SORDELLI, A., PIROSKY, I. & PIROSKY, R. DE, 1942.—“Antígeno para el tratamiento biológico de la hidatidosis.” 11 (2), 226–227.

256—Revista del Instituto de Salubridad y Enfermedades Tropicales. Mexico.

- a. MAZZOTTI, L., 1942.—“La cuti-reacción y la intradermo-reacción aplicadas en un caso humano de *Fasciola hepatica*.” 3 (1), 53–55.
 b. VARGAS, L., 1942.—“Algunas consideraciones sobre el desarrollo de *Onchocerca volvulus* en los Simulidos.” 3 (1), 57–65. [English summary p. 64.]
 c. MAZZOTTI, L., 1942.—“Comprobación de la existencia de *Microfilaria ozzardi* en México.” 3 (3), 223–228. [English summary p. 228.]

(256b) Vargas discusses the mechanism by which Simuliidae become infected with the larvae of *Onchocerca volvulus*. He argues that the number of microfilariae which could occupy the area of skin affected by the mouth parts and could therefore be sucked up could not exceed 10 but that this may be raised to 100 by other factors such as haemorrhage, tearing of the tissues and the freeing of the larvae by the action of the recurved teeth of the maxillae, together with the negative pharyngeal pressure and the long duration of the act of biting which may last 18 minutes. Probably all microfilariae which reach the insect's intestine are killed by the digestive juices and only those which enter the diverticulum survive. R.T.L.

(256c) On the western slope of the Yucatan Peninsula *Microfilaria ozzardi* occurs in several localities and is particularly common at Sta. Cruz (57, or 53%, persons were positive out of 109) and at St. Maria (22, or 78%, were positive out of 28). At Tancunché, 8, or 25%, of 32 persons were positive and at Hecelchakán, 8, or 11%, were positive out of 73. All these centres lie in the province of Campeche. 300 workers from the forest of Quintana Roo in the eastern part of the peninsula were all negative. R.T.L.

257—Revista Médica de Chile.

- a. VARGAS MOLINARE & ARAYA, A., 1942.—“Quiste hidatídico del bazo.” 70 (4), 311–312.
 *b. BENAVENTE GARGES, R., 1942.—“Contribución al tratamiento de los quistes hidatídicos pulmonares con pneumotórax pre-operatorio (método de Arce).” 70, 344–362.

258—Revista de Medicina Veterinaria. Buenos Aires.

- a. QUEVEDO, J. M., 1942.—“Resultados obtenidos con la fenotiazina en caballos portadores de parásitos gastro-intestinales. (Nematodos=lombrices o gusanos redondos).” 24 (12), 13–25.
 b. ECKELL, O. A. & ORLIACQ, C., 1942.—“El vermífugo de Lagaillarde en la estrongilosis equina.” 24 (1/2), 26–34.

(258a) Quevedo has treated 10 horses with phenothiazine for the elimination of gastro-intestinal helminths, and has observed the condition of the blood during treatment. The dosages were: foals under 2 years, 20 g.; 2-year-olds, and mares, 40 g.; stallions and heavy mares, 50 g. On the whole the results were good: the number of ascarid, strongyle and oxyurid eggs in the faeces was reduced, the general condition of the animals was improved while the erythrocyte count and haemoglobin index became normal. P.A.C.

(258b) Eckell & Orliacq have treated equine strongylosis by the technique of Lagaillarde which consists of the administration of a dose of chloroform, aloes and turpentine after a period of starvation, followed by arecolin hydrobromide subcutaneously. It was followed after an interval by another purge. In 73.91% of the cases, a single dose was sufficient to cause the total disappearance of eggs from the faeces. The others needed a second treatment after 30 to 40 days. There seemed to be no contra-indications. P.A.C.

259—Revista Médico-Quirúrgica de Oriente.

- a. VENZANT QUINTANA, E., 1942.—“Infiltrado de Loeffler provocado por el *Necator americano*.” 3 (3), 159-161.

260—Revista de Sanidad Militar. Caracas.

- *a. ANON, 1942.—[Infection with *Necator americanus* (necatoriasis).] 1, 49-55.

261—Rhodesia Herald.

- a. ANON, 1942.—“Fighting eelworm infestation. Successful tests with compost.” 4th September 1942, Section 2, p. 4.

(261a) Five tons per acre of compost applied to tobacco land infested with eelworm [presumably *Heterodera marioni*] are reported to have reduced the eelworm during the first year and caused its disappearance in the second. Other similar cases are reported in Rhodesia and in Ceylon large quantities of compost, green manure or cattle manure are said to have caused great reduction in the eelworm population. The reduction is considered to be due to the increases in fungi, insects and other nematodes which prey on the eelworms, which are brought about by the addition of the organic matter to the soil. M.T.F.

262—Rhodora.

- a. DORE, W. G., 1942.—“Nematode infection in *Poa*.” 44 (523), 246-247.

(262a) Dore reports the finding of nematode infection in the flower spikes of the grass *Poa pratensis* in an old pasture close to the town of Antigonish, Nova Scotia. The presence of the nematodes gives rise to an increase in the length and breadth of the lemma of each flower spikelet and instead of a healthy caryopsis there is formed a purple gall containing the eelworm parasites [probably *Anguillulina agrostis*]. It is suggested by the author that *Poa costata* Schumacher, a rather rare species of *Poa*, is in reality nothing more than eelworm-infected flower spikes of *Poa pratensis*, since examination of herbarium specimens of *P. costata*, collected in Nova Scotia in 1920-21, showed all the flower spikelets to be infected with nematodes. T.G.

263—Science.

- *a. CHANDLER, A. C., 1942.—“First case of human infection with *Mesocestoides*.” 96 (2483) p. 112.
b. BEERS, C. D., 1942.—“An endorsement of the use of generic names as common nouns.” 96 (2496), 403-404.
c. MELCHER, L. R. & CAMPBELL, D. H., 1942.—“A serologically active polysaccharide from *Trichinella spiralis*.” 96 (2497), 431-432.

(263b) Beers draws attention to the advantages, e.g. in economy of printed space, avoidance of burdensome phraseology and elimination of grammatical inaccuracies, pertaining to the use of generic names as common nouns, without initial capital or italics, when the species is clearly understood. He quotes examples to show the sanction which precedent has already conferred on the practice and argues for its extension. [Its adoption would give precision to helminthological literature, and the use of vague terms such as “a strongyle”, “strongyloid worms”, etc., could be avoided.] R.T.I.

(263c) Melcher & Campbell have isolated a polysaccharide, claimed to be reasonably pure, from *Trichinella spiralis* larvae. This polysaccharide, at a dilution of 1:2,000, gave positive precipitin reactions when tested against sera from *Trichinella spiralis*-infected rabbits. Positive skin reactions were also obtained when these animals were injected. Negative results were obtained when the antigen was tested against sera from animals infected with *Ascaris suum*, *Nippostrongylus muris* and *Cysticercus fasciolaris*. A method for the isolation of the polysaccharide is given. W.P.R.

264—Scientific Agriculture.

- a. HASTINGS, R. J., 1942.—“Longevity of congelations of bulb nematode, *Ditylenchus dipsaci* (Kühn) Filipjev, from narcissus.” 23 (1), 1-3.

(264a) Hastings has investigated the longevity of dried masses of the infective stage of the bulb eelworm, *Ditylenchus dipsaci* (Kühn) Filipjev, after storage for a few years under dry conditions. He claims that there is an increase in mortality with length of storage so that the percentage of revivals on moistening correspondingly decreases and that after storage for 4 years all are dead and incapable of revival. He contrast this with survival for longer periods from dried infested material of other plant hosts: alfalfa seed, 5 years; plaintain leaf, 6; garlic, 7; oats and teasel, 9. T.G.

265—Scientific Monthly. New York.

- a. SCHWARTZ, B., 1942.—“Parasitism in relation to the livestock industry of the South.” 54 (5), 448-454.

(265a) Schwartz points out that the distribution of certain economically important helminths is controlled by a number of factors. *Fasciola hepatica* and *Thysanosoma actinioides* are limited in distribution by the absence of a suitable vector. Others, for example many nematodes which have a free-living larval stage, are dependent on certain temperature and moisture requirements. The kidney-worm of swine for instance is found only in tropical and sub-tropical regions. The southern regions of the U.S.A. usually provide more amenable conditions for helminth parasites with the result that disease has become a greater economic problem there than elsewhere in the States. P.A.C.

266—Semana Médica.

- *a. GUERRINI, F. Z. & NATIN, I., 1942.—“Contribución al estudio de la filariosis en la República Argentina.” Año 49, 1, 961-964.
 *b. JORGE, J. M., 1942.—“Deberes del medicocirujano para con la hidatidosis.” Año 49, 1, 1220-1222.
 *c. FERLONI, A. V. J., MARANO, A. & MATERA, R. F., 1942.—“Quiste hidatídico unilocular multivesiculado del lóbulo izquierdo del hígado abierto en una vena suprahepática.” Año 49, 2, 331-336.

267—South African Medical Journal.

- a. DORMER, B. A., 1942.—“A preliminary survey of Bilharzia in native schools in river valleys on the Natal coast.” 16 (19), 353-354.

(267a) By using native malaria assistants, after a brief preliminary training, a survey lasting 18 days was made of the incidence of Bilharzia infection. The results, which are set out in tabular form, show that of 4,489 children attending 119 native schools in river valleys on the Natal coast, 470 children had haematuria, and 96 had blood in the stools. There was active urinary bilharzia in 10%, ranging from 39.61% in the Umkomaas Valley school to 0.87% in the Umvoti Valley school. 99% of the cases of *S. haematobium* were detected by an examination of the uncentrifuged urinary deposits. R.T.I.

268—Surgery, Gynecology and Obstetrics.

- a. ARCE, J., 1942.—“Hydatidosis of the lung.” 75 (1), 67-73.

269—Texas State Journal of Medicine.

- a. McNAUGHT, J. B., 1942.—“The medical and public health aspects of trichinosis.” 38 (4), 252-255.

270—Transactions of the American Microscopical Society.

- a. MANTER, H. W., 1942.—“Monorchidae (Trematoda) from fishes of Tortugas, Florida.” 61 (4), 349-360.
 b. VERGEER, T., 1942.—“Two new pseudophyllidean tapeworms of general distribution in the Great Lakes region.” 61 (4), 373-382.
 c. RISER, N. W., 1942.—“A new proteocephalid from *Amphiuma tridactylum* Cuvier.” 61 (4), 391-397.
 d. BEZDEK, H., 1942.—“Studies on the nematode *Soboliphyme baturini* Petrow, 1930.” 61 (4), 398-403.

(270a) There are 5 new flukes amongst the 9 Monorchidae described from fishes from Tortugas, Florida, viz., *Proctotrema parva* n. sp. from *Haemulon flavolineatum*, *Paraproctotrema brevicacum* n. sp. from *Caranx bartholomaei*, *Monorchis latus* n. sp. from *Haemulon plumieri* and *Anisotremus virginicus*, *Hurleytrema chaetodoni* n. sp. from *Chaetodon ocellatus* and *C. capistratus*, and *H. eucinostomi* n. sp. from *Eucinostomus lefroyi*. Manter regards *Proctotrematoides* Yamaguti, 1938, to be a synonym of *Genolopa* Linton, 1910, which is distinct from *Proctotrema* Odhner, 1911, on account of the spines in the genital atrium. R.T.L.

(270b) The adult of a plerocercoid of general distribution in several species of *Leucichthys* in all 5 of the Great Lakes and from Lake Nipigon, Ontario, has been obtained in kittens by experimental feeding. This is described and named *Diphyllbothrium laruei* n. sp. The plerocercoids vary from 2 to 26 mm. in length. Both scolex and body lack the folds of cuticle so characteristic of plerocercoids of *D. latum*. There is no indication of proglottis formation. They occur in small spherical cysts 0.5 to 2 mm. in diameter usually on the peritoneum of the stomach. From the same regions a plerocercoid showing segmentation and with the scolex usually everted is common in the burbot *Lota maculosa*. It is described under the name, *Sparganum pseudosegmentatum* n. sp. R.T.L.

(270c) *Ophiotaenia alternans* n. sp. is recorded from *Amphiuma tridactylum* caught at Reelfoot Lake, Tennessee. The eggs are oval and very small and do not float. The second egg membrane is oval and the space between it and the outer shell is filled with a granular layer. R.T.L.

(270d) Bezdek recognizes only 2 valid species of *Soboliphyme*, viz., *S. soricis* (type) and *S. baturini*. Differences in size only distinguish *S. sahalinense* from *S. baturini*. Moreover, both came from the same host. R.T.L.

271—Veterinarski Arhiv.

- *a. WINTERHALTER, M. & ERLICH, J., 1942.—“Ein Fall von Cysticercus cellulosae-invasion beim Hunde.” 12, p. 300.

272—Veterinary Journal.

- a. OLDHAM, J. N. & WHITE, E. G., 1942.—“Chronic focal interstitial hepatitis in the pig: preliminary report on the effect of feeding embryonated *Ascaris* eggs.” 98 (1), 16-17.

(272a) Oldham & White cite experiments, not yet completed, which confirm the view that the lesion known as “white spot liver” or “milk spot” in pigs is due to larvae of *Ascaris*. R.T.L.

273—Veterinary Medicine.

- McCULLOCH, E. C. & NICHOLSON, L. G., 1942.—“The effect of phenothiazine on the hemoglobin concentration of chickens.” 37 (6), 248-252.
- CHRISTIAN, D., 1942.—“Why this loss?” 37 (6), 256-257.
- CASE, A. A., 1942.—“*Diphyllbothrium latum* found.” 37 (6), p. 266.
- THORNE, G. B., 1942.—“Animal diseases take heavy annual toll in by-products.” 37 (7), 286-287. [Reprinted from: The National Provisioner, April 4, 1942.]
- TITLE, H. B., 1942.—“Heartworm infestation of dogs.” 37 (7), p. 304.

(273a) Meriweather [see Helm. Abs., Vol. X, No. 323c] had shown (1941) that the blood haemoglobin of fowls dosed with phenothiazine fell temporarily to a minimum at 48 hours after dosing. McCulloch & Nicholson report from controlled experiments that such a fall is mainly due to catching, confining, and handling the birds, and occurs in untreated controls. B.G.P.

(273b) Christian states that *Stephanurus* causes considerable loss of pig carcasses, or of kidneys, liver, or fat, in Georgia. This loss, estimated at over \$0.25 per slaughtered pig, could be largely avoided by strict application of the Swine Sanitation System evolved by the Bureau of Animal Industry. B.G.P.

(273c) Case records for the first time in Kansas an infestation of *Diphyllbothrium latum* in a dog which “scooted along on its rear”. He draws attention to the possible public health implications of this infestation. B.G.P.

(273d) Thorne estimates that the loss, on an industrial basis, due to damage by parasitic and other diseases to such by-products as gut casings, hides, lungs and livers, amounts annually to \$17 million [presumably in the U.S.A. alone]. B.G.P.

(273e) Title reports about 100 cases of *Dirofilaria immitis* infestation in dogs in Mississippi over a period of 2 years, and including dogs as young as 18 months. He recommends 2 c.c. of Fouadin intravenously, repeated 10 to 12 times. B.G.P.

274—Veterinary Record.

- a. STEWART, W. L. & CROFTON, H. D., 1942.—“ ‘Black-rush’—a form of winter trichostrongylosis in Northumberland.” 54 (50), 515-516.

(274a) “Black-rush” or “black scours” is a disease of common occurrence in young hill sheep (hogs) and is usually seen in the early months of the year. The authors consider it to be due to heavy infestations with trichostrongyles and aggravated by the malnutrition which is often found in hill sheep during the winter months. Treatment with phenothiazine early in December, before the onset of the disease, is recommended. D.O.M.

275—Wasmann Collector.

- *a. POLK, S. J., 1942.—“The genus *Dilepis* Weinland 1858.” 5 (1), 25-32.

276—Zeitschrift für Parasitenkunde.

- a. DOSSE, G., 1942.—“Beiträge zur morphologischen und histologischen Untersuchung parasitischer Nematoden.” 12 (4), 451-478.

(276a) Dosse has studied the morphology and histological structure of preserved specimens of *Ozolaimus cirratus* (Linstow, 1906) and *O. megatyphlon* (Rud., 1819) Duj., 1845, obtained originally from the alimentary tract of an iguana of undetermined species. He shows that the two species are distinct and well-established, exhibiting differential features in the shape of the oesophagus, the location and form of the vulva, in the structure of the pre-uterus, in the length of the spicules, and in the male genital appendages. The genus *Ozolaimus* is well characterized by the presence of 3 lips of which the 2 laterals are large whilst the third (dorsal) is degenerate. From the same collection of worms he obtained specimens of another nematode which is described as *Tachygonetria longiisthmus* n. sp. T.G.

277—Zentralblatt für Bakteriologie. Abteilung 1. Originale.

- a. GÖNNERT, R., 1942.—“Zur Lebensdauer menschlicher Mikrofilarien.” 149 (2), 75-81.
 b. EMMEL, L., 1942.—“Die Cercarien von *Bithynia tentaculata* L. und *B. leachi* Leach aus einem Berliner Standort, ihre jahreszeitliche Verteilung und die Spezifität ihrer Anpassung an den Zwischenwirt.” 149 (2), 81-98.
 c. VOGEL, H., 1942.—“Ueber die Nachkommenschaft aus Kreuzpaarungen zwischen *Bilharzia mansoni* und *B. japonica*.” 149 (5), 319-333.

(277a) In order to determine the longevity of *Microfilaria loa* and *Mf. perstans* the author submitted to a transfusion of 160 c.c. of blood (estimated to contain 1,640,000 *Mf. loa* and 112,000 *Mf. perstans*) from an infected patient. Immediately after transfusion there was a high fever which subsided after 8 days. From the third day there was a marked increase in eosinophiles. The increased eosinophile counts persisted for a few weeks. *Mf. loa* were present in the peripheral blood on the following day in large numbers and periodicity was observed. On the two succeeding days microfilarial counts were greatly reduced. From the fourth day none could be demonstrated. That *Mf. perstans* survived for at least 3 years was proved by blood examination. There was, however, no growth of the microfilariae. R.T.L.

(277b) The infection of *B. tentaculata* and *B. leachi* with trematode larvae in the course of a year has been studied from the point of view of host specificity and seasonal variation. The variations in infections with trematode larvae during the course of a year are approximately the same for both species of snail. There are two peaks of infection. The first increase begins in May and reaches a peak at the end of June or at the beginning of July. A low level is reached at the end of July. The second increase, which is more gradual, begins

in August and, in the case of *B. tentaculata*, reaches a springtime peak at the end of April; in the case of *B. leachi* this peak is reached at the beginning of May. The subsequent low level of infection in *B. tentaculata* is reached at the beginning of May, and in *B. leachi*, at the end of May. Eleven different trematode larvae were found; "Gymnocephale Cercariae 2 and 3" were considered to be new species and are described as *Cercaria diplophysa* n. sp. and *C. multiglandula* n. sp. Double infections with two species of cercariae were only observed in the case of the two Xiphidiocercariae (X1 and X2) in *B. leachi*. Concomitant infections of cercariae and encysted cercariae and of two different encysted cercariae in the same snail were much more common. All cercariae examined, with the exception of Xiphidiocercariae 1 and 2, showed host specificity. Apart from these two Xiphidiocercariae and Cercariaeum 2 all members of other groups only parasitized *B. tentaculata*. No specificity was found in the case of encysted cercariae. Young *Bithynia* with up to 4 whorls and a height of 4 mm. showed only encysted cercariae. The two species of *Bithynia* appear to provide different environmental conditions for the majority of the cercariae studied. This would explain why *Opisthorchis felineus* specializes in *B. leachi*.
R.T.L.

(277c) Vogel infected hamsters and mice with (i) *Schistosoma japonicum* males and *S. mansoni* females and (ii) *S. mansoni* males and *S. japonicum* females. The great majority of the eggs from both these crosses did not develop at all. In a few cases embryos developed, the majority of which soon died off and disintegrated. Only in one or two of the eggs did a mature miracidium develop. When hatched the behaviour of the miracidia in water resembled that of the maternal species. *Oncomelania hupensis*, *Planorbis guadaloupensis* and *P. pfeifferi* could not be infected with miracidia from the cross *S. mansoni* males and *S. japonicum* females. But miracidia from the cross *S. japonicum* males and *S. mansoni* females developed to cercariae in *Planorbis pfeifferi*, but not in *P. guadaloupensis* or *Oncomelania hupensis*. The infectivity rate in *P. pfeifferi* was very much lower than that for normal *S. mansoni* miracidia: only 16 snails out of 172 were infected. The cercariae which developed agreed in morphology and behaviour entirely with *S. mansoni*, i.e. the maternal species, and the adult worms showed the characteristics of *S. mansoni*. The various factors which may have led to the maternal characteristics of the F_1 generation are mentioned and discussed. The possibility of a Mendelian dominance of the *S. mansoni* characteristics over those of *S. japonicum* would appear to be excluded since the F_2 generation does not show a division of the paternal and maternal characteristics: only the latter are in evidence. It is probable that there was a parthenogenetic development of the eggs to which the spermatozoa of the different species gave the stimulus to development without, however, taking any part in the development (pseudogamy). Cytological observation of the cercariae of the F_1 generation showed the diploid chromosome number (16), a fact which does not exclude the possibility of parthenogenetic development. A noteworthy feature of the F_1 generation was the appearance of both sexes, in spite of the apparent maternal inheritance, and a marked predominance of males.
R.T.L.

NON-PERIODICAL LITERATURE.

- 278—*BRUMPT, E. & NEVEU-LEMAIRE, M., 1942.—"Praktischer Leitfaden der Parasitologie des Menschen: für Biologen, Ärzte, Tropenhygieniker und Studierende. Übersetzung und Bearbeitung der dritten französischen Auflage von Albert Erhardt." Berlin, ix+257 pp.
- 279—*BÜHNER, F., 1942.—"Untersuchungen über die Veränderung des Artenverhältnisses der Pferdestrongyliden I. nach Perequid-, II. nach Noemin-Gaben." Dissertation, Hannover.
- 280—GORDON, H. McL., 1942.—"Economy and efficiency in the control of worm parasites of sheep." Council for Scientific and Industrial Research, Australia, Division of Animal Health and Nutrition, 26 pp.

The control of worms in sheep in war-time has raised many problems for Australian graziers. Among these, the short supply and increased cost of certain anthelmintics and the shortage of labour are of considerable importance. Gordon comments on these problems and suggests that, in order to conserve these drugs, drenching should be carried out only at

such times when maximum benefit is likely to be obtained. He also recommends the use of home-prepared mixtures and the dosing of the appropriate drug for each particular parasite. Methods, other than drenching, for controlling sheep parasites are also discussed. D.O.M.

281—GOULD, S. E., 1942.—“Immunologic reactions in human helminthology, with special reference to trichinosis.” Dissertation, University of Michigan, Ann Arbor, 104 pp.

282—*KRAUSE, M., 1942.—“Die Wirkung von Arsinosolvin und Equivermox auf die verschiedenen Arten der Pferdestrongyliden.” Dissertation, Hannover.

283—*KRAUSS, F., 1942.—“Wurmmittel und Wurmbabtreibeverfahren in der Volksmedizin einst und jetzt. (Im Anhang: Versuche mit Götterbaumrinde).” Dissertation, Hannover.

284—OGDEN, C. K., 1942.—“Basic for science.” London, ix+314 pp.

This little volume gives a general account of the way in which Basic English may be used for the purposes of science and some idea is given of the structure and operation of this new system, full details of which are printed in *Basic English* and *The ABC of Basic English*. Among the examples of the use of Basic English in different fields of science is an article by Col. Clayton Lane on “The Cause of Hookworm Anaemia”. This is a reprint of “Hookworm Anaemia, An Outline in Basic of Present Knowledge and Opinion” published in 1937 in the *Tropical Diseases Bulletin*. In writing this article Col. Lane made use only of the everyday Basic list and the General Science List as the Biology List of words had not been printed at that time. There appears to be a distinct field for the use of Basic as an international language, especially in the writing of abstracts and of summaries of scientific papers. R.T.L.

285—PEARSE, A. S., 1942.—“Introduction to parasitology.” Springfield & Baltimore, ix+357 pp.

286—*SCHICK, H., 1942.—“Ein Beitrag zur Frage des Invasionsmodus der Pferde mit Strongyliden im Stall.” Dissertation, Leipzig.

287—*THIEM, W., 1942.—“Die Wirkung von Arsinsäure und Allegan auf die verschiedenen Arten der Pferdestrongyliden.” Dissertation, Hannover.